

QUANTIFICATION SETTLEMENT AGREEMENT

by and among

IMPERIAL IRRIGATION DISTRICT,

a California irrigation district;

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA,

a California metropolitan water district

and

COACHELLA VALLEY WATER DISTRICT,

a California county water district

Dated October 10, 2003

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QUANTIFICATION SETTLEMENT AGREEMENT

THIS AGREEMENT is made and entered into as of this 10th day of October, 2003, by and among Imperial Irrigation District ("**IID**"), a California irrigation district, The Metropolitan Water District of Southern California ("**MWD**"), a California metropolitan water district, and Coachella Valley Water District ("**CVWD**"), a California county water district, each of which is at times referred to individually as "**Party**" and which are at times collectively referred to as "**Parties**."

RECITALS:

- A. IID is an irrigation district organized under the California Irrigation District Law, codified at §§ 20500 et seq. of the California Water Code, and delivers Colorado River water in Imperial County, California for potable and irrigation purposes.
- B. MWD is a metropolitan water district organized under the California Metropolitan Water District Act, § 109-1 of the Appendix to the California Water Code, and engaged in developing, storing and distributing water in the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura, California.
- C. CVWD is a county water district organized under the California County Water District Law, codified at §§ 30000 et seq. of the California Water Code, and delivers Colorado River water in Riverside County, California for potable and irrigation purposes.
- D. IID, MWD, PVID and CVWD are each contractors with the United States for delivery of Colorado River water as authorized by the Boulder Canyon Project Act (Act of December 21, 1928: 45 Stat.1057, as amended.)
- E. Pursuant to those contracts, PVID, the Yuma Project (Reservation Division), IID and CVWD (collectively "the agricultural agencies") hold California's first three priorities to Colorado River water and are collectively entitled to the beneficial consumptive use as reasonably required of not to exceed 3,850,000 AFY. The fourth and fifth priorities totaling 1,212,000 AFY are held by MWD. The sixth priority of 300,000 AFY is held by IID, CVWD and PVID. The seventh priority of all remaining water available for use within California is reserved for agricultural use in the Colorado River Basin within California, which includes the lands within IID, CVWD and PVID. MWD and CVWD also have surplus water delivery contracts with the Secretary of the Interior.
- F. MWD, IID and CVWD recognize that they have differences of opinion over various legal questions including the right to transfer water and the volumes of water to which the various right holders are entitled, but each Party wishes to go forward with this Agreement and associated agreements without regard to certain current or future differences, subject to the provisions of Article 4 hereof.
- G. This Agreement and the Related Agreements are intended to consensually settle longstanding disputes regarding the priority, use and transfer of Colorado River water, to establish by agreement the terms for the further distribution of Colorado River water among the

Parties for up to seventy-five (75) years based upon the water budgets set forth herein, and to facilitate agreements and actions which will enhance the certainty and reliability of Colorado River water supplies available to the Parties and assist the Parties in meeting their water demands within California's apportionment of Colorado River water by identifying the terms, conditions and incentives for the conservation and distribution of Colorado River water within California.

H. IID seeks to settle disputes with CVWD and MWD and to use proceeds from the acquisition of Conserved Water by those Parties from IID to improve the reliability, efficiency and management of its Colorado River supply.

I. CVWD seeks to settle disputes with IID and MWD and to acquire Conserved Water for irrigation and potable uses to accommodate anticipated reductions in groundwater extraction.

J. MWD seeks to settle disputes with IID and CVWD and to ensure the reliability of its Colorado River supplies.

K. The Salton Sea Reclamation Act of 1998 expresses a federal interest in exploring whether the Salton Sea can be stabilized and reclaimed in the long term to preserve a healthy fish and wildlife resource habitat, yet recognizes that such stabilization and reclamation needs to accommodate the potential reduced inflows to the Salton Sea that may result from the conservation and transfer of conserved water by the IID.

L. The California State Legislature adopted and the Governor signed into law in 2003 three Acts (Stat. Chaps. 612, 611 and 654), commonly referenced as SB 317 (the "Kuehl Bill"), SB 277 (the "Ducheny Bill"), and SB 654 (the "Machado Bill") to facilitate implementation of this Agreement and the Related Agreements (as defined herein) (the Kuehl Bill, the Ducheny Bill and the Machado Bill are referenced collectively in this Agreement as the "QSA Legislation").

M. The State Water Resources Control Board, by its Order dated October 28, 2002, conditionally approved a joint petition, as amended, filed by IID and SDCWA for approval of the proposed transfer by IID of up to 200,000 AFY of Colorado River Water to SDCWA and for an acquisition of up to 100,000 AFY by CVWD or MWD and a petition filed by IID to change the point of diversion, place of use, and purpose of use under IID's Permit 7643 (as the same may be amended upon reconsideration, if any, the "SWRCB Order").

N. The Parties intend and believe that the Effective Date (defined below) of this Agreement and certain Related Agreements (as defined herein) will occur after the completion of review and adequate provision for any required mitigation under and in compliance with the California Environmental Quality Act, California Public Resources Code §§ 2100 et seq. ("CEQA").

ARTICLE 1 DEFINITIONS

1.1 **Definitions.** As used in this Agreement, the following terms have the following meanings:

(1) **Approval Agreement.** The agreement between IID, MWD, CVWD and PVID dated December 19, 1989, and entitled Approval Agreement.

(2) **1998 IID/SDCWA Transfer Agreement.** The Agreement for Transfer of Conserved Water by and between IID and SDCWA dated April 29, 1998, as thereafter amended by IID and SDCWA through the Revised Fourth Amendment dated as of October 10, 2003, with such further changes thereto as IID and SDCWA may from time to time agree subject to the provisions of Section 4.8 hereof.

(3) **Acquisition Agreements.** Collectively, the 1998 IID/SDCWA Transfer Agreement, the CVWD/MWD Acquisition Agreement, the IID/MWD Acquisition Agreement, the IID/CVWD Acquisition Agreement, and the MWD/CVWD Transfer and Exchange Agreement.

(4) **AF.** Acre-foot, a measure of volume.

(5) **AFY.** Acre-feet per Calendar Year.

(6) **All-American Canal.** The canal and appurtenant works from Imperial Dam to the Imperial and Coachella Valleys authorized in Section 1 of the Boulder Canyon Project Act.

(7) **Allocation Agreement.** The Agreement dated as of the Closing Date among the Secretary and the other parties thereto, concerning the allocation of Conserved Water created as a result of the lining of the All-American Canal and the Coachella Canal, with such changes to such agreement as may be from time to time agreed upon in writing in accordance with such agreement.

(8) **Assignment (or Assign).** Any sale, gift, pledge, hypothecation, encumbrance, or other transfer of all or any portion of the rights in or arising from this Agreement to any person or entity (excluding such a transfer by operation of law), regardless of the legal form of the transaction in which the attempted transfer occurs.

(9) **BOR.** The United States Bureau of Reclamation.

(10) **Business Day.** A day that is not a Saturday, Sunday, or federal or California state legal holiday.

(11) **Calendar Year.** The twelve (12)-month period running from January 1 through December 31.

(12) **Calendar Year Quarter**. Any of the four three-month periods (i) January through March; (ii) April through June; (iii) July through September; or (iv) October through December.

(13) **CEQA**. As defined in Recital N.

(14) **Closing Date**. October 10, 2003, the date as of which all Parties Execute this Agreement and all Related Agreements dated as of the Closing Date.

(15) **Coachella Canal**. The Coachella branch of the All-American Canal leading from the All-American Canal to the CVWD service area authorized in Section 1 of the Boulder Canyon Project Act.

(16) **Colorado River Aqueduct**. The aqueduct system owned and operated by MWD and extending from Lake Havasu to Lake Mathews in Riverside County.

(17) **Conserved Water**. Water made available for acquisition under this Agreement and the Related Agreements attributable to: (i) Temporary Land Fallowing or crop rotation, if an allowed use is for irrigation, or (ii) projects or programs that enable the use of less water to accomplish the same purpose or purposes of allowed use; provided, however, that such term does not include water attributable to:

(a) the activities described in (i) or (ii) above not voluntarily undertaken; or

(b) the activities described in (i) above voluntarily undertaken in exchange for money payment or other valuable consideration received from a governmental source other than SDCWA, MWD, CVWD or the California Department of Water Resources ("DWR"); and

(c) the resulting volume of reduced water produced from (a) or (b) above cannot be used anywhere within the IID Service Area.

(18) **Consumptive Use**. The diversion of water from the main stream of the Colorado River, including water drawn from the main stream by underground pumping, net of measured and unmeasured return flows.

(19) **Conveyance Loss**. The actual loss of water to evaporation, seepage, or other similar cause resulting from any transportation of Conserved Water from Imperial Dam to the CVWD service area or to the MWD service area, as the case may be.

(20) **CVWD**. As defined in Recital C.

(21) **CVWD/MWD Acquisition Agreement**. The agreement between CVWD and MWD dated as of the Closing Date regarding the acquisition of Conserved Water, with such changes thereto as CVWD and MWD may from time to time agree subject to the provisions of Section 4.8 hereof.

(22) **CVWD/MWD Supplemental Agreement**. The agreement between CVWD and MWD dated December 19, 1989, and entitled Agreement to Supplement Approval Agreement.

(23) **Date of Non-consensual Termination of the 1998 IID/SDCWA Transfer Agreement**. The date on which the Non-consensual Termination of the 1998 IID/SDCWA Transfer Agreement becomes effective.

(24) **NEPA**. The National Environmental Policy Act.

(25) **Delegation (or Delegate)**. Any sale, gift, pledge, hypothecation, encumbrance, or other transfer of all or any portion of the obligations or liabilities in or arising from this Agreement to any person or entity (excluding such a transfer by operation of law), regardless of the legal form of the transaction in which the attempted transfer occurs.

(26) **Intentionally Not Used**.

(27) **Effective Date**. The date on which the United States District Court, Southern District of California, Case No. 03cv0069w (JFS) executes the Stipulation and Order dismissing the case IID v. United States, et al.

(28) **Environmental Cost Sharing, Funding and Habitat Conservation Plan Development Agreement or ECSA**. The agreement among IID, CVWD and SDCWA dated as of the Closing Date, concerning, among other things, the sharing and payment of certain environmental review and mitigation costs pertaining to this Agreement and certain Related Agreements with such changes thereto as such parties may from time to time agree in writing.

(29) **QSA Legislation**. As defined in Recital L.

(30) **Execution or Executed**. The execution and delivery of this Agreement and the Related Agreements dated as of the Closing Date by a duly-authorized representative of a party thereto, on behalf of such party, without conditions or reservations of any kind, except as may be expressly set forth in the agreement thereby executed and delivered.

(31) **Flood Control Release**. The release of water from Lake Mead and the operation of Hoover Dam for flood control purposes pursuant to the reservoir operating criteria specified in the February 8, 1984 Field Working Agreement between the U.S. Army Corps of Engineers and the BOR, and the U.S. Army Corps of Engineers regulations contained in Volume 33 of the Code of Federal Regulations, Part 208.11.

(32) **Force Majeure**. An event, not within the control of the Parties, which materially and adversely affects the performance of their respective obligations and duties to properly construct, operate, establish, implement or maintain the means of creating or receiving deliveries of Conserved Water, including a Transfer Stoppage as defined herein.

(33) **GDPIPD Inflation Index**. For any Calendar Year Quarter after the fourth Calendar Year Quarter of 1998, the ratio of the published value for that quarter of the Gross Domestic Product Implicit Price Deflator published quarterly by the Bureau of Economic

Analysis of the United States Department of Commerce in the Survey of Current Business, divided by the value of the Gross Domestic Product Implicit Price Deflator for the fourth Calendar Year Quarter of 1998. The GDPIPD Inflation Index for future quarter "n" is calculated by the following formula:

$$\frac{\text{GDPIPD Inflation Index Quarter "n"}}{\text{GDPIPD Inflation Index Fourth Quarter 1998}}$$

(34) **IID**. As defined in Recital A.

(35) **IID Service Area**. That area of Imperial Valley described in IID's Section 5 Contract as in effect on October 15, 1999.

(36) **IID/CVWD Acquisition Agreement**. The agreement between IID and CVWD dated as of the Closing Date regarding the acquisition of Conserved Water, with such changes thereto as IID and CVWD may from time to time agree subject to the provisions of Section 4.8 hereof.

(37) **IID/MWD 1988 Agreement**. The agreement between IID and MWD dated December 22, 1988, and entitled Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water.

(38) **IID/MWD Acquisition Agreement**. The agreement between IID and MWD dated as of the Closing Date regarding the acquisition of Conserved Water, with such changes thereto as IID and MWD may from time to time agree subject to the provisions of Section 4.8 hereof.

(39) **Implementation Agreement**. The Colorado River Water Delivery Agreement among the Secretary, IID, CVWD, MWD and SDCWA, dated as of the Closing Date, containing the terms of agreement with the Secretary regarding this Agreement and the Related Agreements in taking actions concerning the Colorado River, with such changes thereto as the parties thereto may from time to time agree.

(40) **Improvement District No. 1**. That area of land described in Exhibit "B" of the Contract for Construction of Capacity in Diversion Dam, Main Canal and Appurtenant Structures and for Delivery of Water between the United States and Coachella Valley County Water District dated October 15, 1934, as heretofore or hereafter modified under Section 15 of the Agreement of Compromise between Imperial Irrigation District and Coachella Valley County Water District dated February 14, 1934; provided, however, that any modification that requires IID's consent shall also require MWD's consent for purposes of this definition.

(41) **Inadvertent Overrun and Payback Policy**. The BOR program described in and contemplated under Section 6.2(4) hereof.

(42) **Inflation Index**. For any Calendar Year Quarter ending after January 1, 1999, the arithmetic average of the PPI Inflation Index and the GDPIPD Inflation Index. The Inflation Index for any future Calendar Year Quarter "n" is calculated by the following formula:

$$I_n = \frac{(\text{PPI Inflation Index} + \text{GDPIPD Inflation Index})}{2}$$

(43) **Interim Surplus Guidelines**. The federal guidelines described in Section 6.2(5) hereof.

(44) **MWD**. As defined in Recital B.

(45) **MWD/CVWD Delivery and Exchange Agreement**. The agreement between MWD and CVWD dated as of the Closing Date regarding the transfer by MWD to CVWD of thirty-five thousand (35,000) AFY of MWD's State Water Project entitlement and the exchange of such water for Colorado River water, with such changes thereto as MWD and CVWD may from time to time agree subject to the provisions of Section 4.8 hereof.

(46) **"N" Dollars**. That nominal dollar amount in a future Calendar Year Quarter "n" which, when adjusted based on the Inflation Index ("I_n") is equivalent to the specified dollar amount in the Agreement measured as of the Year Z specified in the Agreement. The adjustment is calculated according to the following formula:

$$\text{"N" Dollars} = \text{Nominal Dollar Amount} = \$\text{zzz}(\text{Year Z}) \times \text{Inflation Index}_n$$

(47) **Neutral County**. Any county other than Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego or Ventura.

(48) **Non-consensual Termination of the 1998 IID/SDCWA Transfer Agreement**. The termination of the 1998 IID/SDCWA Transfer Agreement after the Effective Date,

(i) [Intentionally not used]

(ii) by reason of the termination pursuant to Section 4.1(c) of the 1988 IID/SDCWA Transfer Agreement; or

(iii) by reason of the expiration of the Initial Term without the commencement of a Renewal Term in Year 46, as defined in the 1998 IID/SDCWA Transfer Agreement, or if renewed, the expiration of the Renewal Term.

(49) **QSA**. This Agreement, the Quantification Settlement Agreement.

(50) **PPI Inflation Index**. For the last month of any Calendar Year Quarter ending after January 1, 1999, the ratio for the published value for that month of the Producer Price Index for the Materials and Components for Construction (ID #WPUSOP2200) published by the United States bureau of Labor Statistics, divided by the published value for December 1998. The PPI Inflation Index for future month "n" is calculated by the following formula for published values:

PPI month "n"
PPI December 1998

(51) **Priority "Z"**. The contractual priority level of the right to Colorado River water by the California agencies with Section 5 Contracts, with "Z" varying between Priority 1 and Priority 7, as set forth in the provisions of Article I, Sections 1-7 of the Seven-Party Agreement of 1931, which provisions are included in each Section 5 Contract.

(52) **QSA-JPA**. The QSA Joint Powers Agreement dated as of the Closing Date among IID, CVWD, SDCWA and the State of California or the Joint Powers Authority established thereby, as the context requires.

(53) **PVID**. The Palo Verde Irrigation District, an irrigation district organized under the Palo Verde Irrigation District Act, §§ 33-1 et seq. of the Appendix to the California Water Code.

(54) **Related Agreements**. The Acquisition Agreements, the Allocation Agreement, the Implementation Agreement, the Amendments to the IID/MWD 1988 Agreement, the 1989 Approval Agreement and the CVWD/MWD Supplemental Agreement, the MWD/CVWD Delivery and Exchange Agreement, the ECSA, the QSA-JPA, the agreements listed on Exhibits A and B hereto, and any other agreements, amendments and waivers entered into or adopted by or with the written consent of all Parties in connection with this Agreement or made pursuant to Section 4.8 hereof. The Parties recognize and agree that the performance under, or the effectiveness of, each of the agreements listed on Exhibit B, even though Executed as of the Closing Date, is or may be contingent on the receipt of various permits, approvals and consents, as specified in those agreements.

(55) **SDCWA**. The San Diego County Water Authority, a California county water authority incorporated under the California County Water Authority Act, §§ 45-1 et seq. of the Appendix to the California Water Code.

(56) **SDCWA/MWD Exchange Agreement**. The Agreement for the Exchange of Water dated November 10, 1998 between SDCWA and MWD, as amended and restated in its entirety by the Agreement between SDCWA and MWD dated as of the Closing Date.

(57) **Secretary**. The Secretary of the United States Department of the Interior, and duly appointed successors, representatives and others with properly delegated authority.

(58) **Section 5 Contract**. A contract between the Secretary and a California agency for permanent service for the delivery of Colorado River water, established pursuant to Section 5 of the Boulder Canyon Project Act, 43 U.S.C. § 617d.

(59) **SWRCB**. The California State Water Resources Control Board.

(60) **SWRCB Order**. As defined in Recital M.

(61) **Temporary Land Fallowing**. The creation of Conserved Water from the retirement of land from crop production activities for a period starting no earlier than the Effective Date and ending on or prior to the Termination Date.

(62) **Termination Date**. The Termination Date is the earlier of (i) midnight on October 12, 2003, if the Effective Date has not by then occurred; (ii) the Date of Non-consensual Termination of the 1998 IID/SDCWA Transfer Agreement; (iii) the end of the twelfth (12th) calendar month following the date of a Transfer Stoppage, unless such Transfer Stoppage has been overturned or modified or remedied to the satisfaction of each affected Party, or unless the Parties, SDCWA and the Secretary have agreed to continue this Agreement and the Related Agreements notwithstanding the continuation of such Transfer Stoppage; or (iv) December 31, 2077.

(63) **Transfer Stoppage**. A transfer or acquisition of Conserved Water pursuant to this Agreement that is ordered to stop by virtue of an injunction or other order issued by a court or administrative agency acting within the scope of its jurisdiction.

(64) **"Year _____" (e.g., Year 25.)**. One in the series of Calendar Years occurring after the Effective Date; provided, however, that Year 1 shall commence on the Effective Date and end on December 31, 2003.

1.2 Rules of Construction and Word Usage. Unless the context clearly requires otherwise:

(1) The Recitals to this Agreement are a part of this Agreement to the same extent as the Articles;

(2) The Exhibits and Attachments attached to this Agreement are incorporated by reference and are to be considered part of the terms of this Agreement;

(3) The plural and singular numbers include the other;

(4) The masculine, feminine, and neuter genders include the others;

(5) "Shall," "will," "must," and "agrees" are each mandatory;

(6) "May" is permissive;

(7) "May not" is prohibitory;

(8) "Or" is not exclusive;

(9) "Includes" and "including" are not limiting;

(10) "Between" includes the ends of the identified range;

(11) "Person" includes any natural person or legal entity; and

(12) "Transfer," when used herein or in the Related Agreements in relation to a transaction involving Conserved Water, does not mean or imply that the Parties agree as to whether any such transaction is properly characterized as a transfer under California law or whether such transaction is subject to SWRCB jurisdiction.

ARTICLE 2 WATER BUDGETS

2.1 IID Water Budget.

(1) **Priority 3a Cap.** IID's Consumptive Use entitlement under its share of Priority 3a is capped by this Agreement at three million one hundred thousand (3,100,000) AFY at Imperial Dam, **less** (i) the Conserved Water made available by IID for use by others hereunder, and (ii) the water made available under Paragraph (2) of this Section 2.1 to the extent charged to Priority 3a, and **plus** any Conserved Water made available to IID from the lining of the All-American and Coachella Canals, as provided under and subject to the terms and conditions of the Allocation Agreement. This cap shall be subject to adjustment in any Year to the extent permitted under or required by the Inadvertent Overrun and Payback Policy. Any Colorado River water permitted to be acquired under Section 4.3 hereof shall be in addition to this cap.

(2) **Miscellaneous and Indian PPR's.** IID shall forbear Consumptive Use when necessary, in conjunction with the Inadvertent Overrun and Payback Policy, to permit the Secretary to make available for Consumptive Use by holders of miscellaneous and Indian present perfected Colorado River water rights the aggregate amount necessary to satisfy individually their respective present perfected rights to Colorado River water, up to a maximum of eleven thousand five hundred (11,500) AFY. IID's obligation to forbear use of water for this purpose may be charged, at IID's option, to its rights under Priorities 6a, 7 or 3a as available. In the event it is not necessary in any Year for IID and CVWD to collectively forbear a total of fourteen thousand five hundred (14,500) AF for this purpose, then a credit equal to the difference between 14,500 AF and the amount of actual necessary forbearance responsibility shall be shared seventy-five percent (75%) to IID and twenty-five percent (25%) to CVWD.

(3) **IID Priority 6a Forbearance and Priority 7 Use.** IID agrees to forbear Consumptive Use under Priority 6a sufficient to enable IID, CVWD and MWD to Consumptively Use Priority 6a water as it may be available in accordance with the following order of use subject to any rights that PVID might have, except as may otherwise be required under the Interim Surplus Guidelines: first, thirty-eight thousand (38,000) AFY to MWD; second, sixty-three thousand (63,000) AFY to IID; third, one hundred nineteen thousand (119,000) AFY to CVWD; fourth, any balance of Priority 6a and 7 water available in accordance with the priorities identified in IID, CVWD and MWD Section 5 Contracts, as in effect on October 15, 1999. Should IID, CVWD or MWD not Consumptively Use all or any of the Priority 6a or 7 water available to it as provided above, any unused volume shall be available in the above order to meet the next lower order Consumptive Use needs.

(4) **Acquisition Mechanism and Location.** IID performs its obligations to make Conserved Water available for CVWD and MWD acquisition as contemplated by this

Agreement by reducing its Consumptive Use at Imperial Dam by an amount equal to the Conserved Water to be acquired. When IID acts in that manner, IID has satisfied its obligation to make Conserved Water available for acquisition. CVWD and MWD each accept responsibility for any arrangements and facilities necessary to divert the Conserved Water made available to either of them and for any Conveyance Loss. CVWD and MWD have no duty to divert any or all of the Conserved Water. The payments by CVWD and MWD to IID under their respective Acquisition Agreements are for the conservation and acquisition of the Conserved Water, whether or not CVWD or MWD actually diverts that Conserved Water.

(5) **Conserved Water for CVWD.** IID shall make Conserved Water available to CVWD under and subject to the terms and conditions of the IID/CVWD Acquisition Agreement and the Implementation Agreement.

(6) **Conserved Water for SDCWA.** The terms and conditions applicable to IID's conservation and transfer of Conserved Water to SDCWA contemplated by this Agreement shall be as set forth in the 1998 IID/SDCWA Transfer Agreement.

(7) **Conserved Water for MWD.** IID shall make Conserved Water available to MWD under and subject to the terms and conditions of the IID/MWD Acquisition Agreement.

(8) **Conserved Water from Canal Lining Projects.** Conserved Water resulting from the lining of the All-American Canal and the Coachella Canal shall be made available as provided under and subject to the terms and conditions of the Allocation Agreement.

(9) **Conservation Methods.** The creation of Conserved Water by IID utilizing efficiency improvements or fallowing for acquisition, transfer or lessening environmental impacts, shall be as described in the Compromise IID/SDCWA and QSA Delivery Schedule attached hereto as Exhibit C.

2.2 **CVWD Water Budget.**

(1) **Priority 3a Cap.** CVWD's Consumptive Use entitlement under its share of Priority 3a is capped by this Agreement at three hundred thirty thousand (330,000) AFY at Imperial Dam, less (i) Conserved Water made available from the lining of the Coachella Canal, as provided under and subject to the terms and conditions of the Allocation Agreement, and (ii) the water made available under paragraph (2) of this Section 2.2 to the extent charged to Priority 3a. This cap shall be subject to adjustment in any Year to the extent permitted under or required by the Inadvertent Overrun and Payback Policy and the Decree Accounting Program. Any Colorado River water acquired from any Party pursuant to a transaction contemplated by this Agreement or permitted to be acquired under Section 4.3 hereof shall be in addition to this cap.

(2) **Miscellaneous and Indian PPR's.** CVWD shall forbear Consumptive Use when necessary, in conjunction with the Inadvertent Overrun and Payback Policy, to permit the Secretary to make available for Consumptive Use by holders of miscellaneous and Indian present perfected Colorado River water rights the aggregate amount necessary to satisfy individually their respective present perfected rights to Colorado River water, up to a maximum of three thousand (3,000) AFY. CVWD's obligation to forbear use of water for this purpose may

be charged, at CVWD's option, to its rights under Priorities 6, 7 or 3 as available. In the event that it is not necessary in any Year for IID and CVWD to collectively forbear a total of fourteen thousand five hundred (14,500) AF for this purpose, then a credit equal to the difference between fourteen thousand five hundred (14,500) AF and the amount of actual necessary forbearance responsibility shall be shared seventy-five percent (75%) to IID and twenty-five percent (25%) to CVWD.

(3) **CVWD Priority 6a Forbearance and Priority 7 Use.** CVWD agrees to forbear Consumptive Use under Priority 6a sufficient to enable IID, CVWD and MWD to Consumptively Use Priority 6a water as it may be available in accordance with the following order of use, subject to any rights that PVID might have, except as may otherwise be provided under the Interim Surplus Guidelines: first, thirty-eight thousand (38,000) AFY to MWD; second, sixty-three thousand (63,000) AFY to IID; third, one hundred nineteen thousand (119,000) AFY to CVWD; fourth, any balance of Priority 6a and 7 water available in accordance with the priorities identified in the IID, CVWD and MWD Section 5 Contracts, as in effect on October 15, 1999. Should IID, CVWD or MWD not Consumptively Use all or any of the Priority 6a or 7 water available to it as provided above, any unused volume shall be available in the above order to meet the next lower order Consumptive Use needs.

(4) **Acquisition From IID.** The terms and conditions applicable to the acquisition of Conserved Water by CVWD from IID, as contemplated by this Agreement, shall be as set forth in the IID/CVWD Acquisition Agreement.

(5) **Acquisition From MWD.** The terms and conditions of the acquisition of water and entitlement to water by CVWD from MWD, as contemplated by this Agreement, shall be as set forth in the CVWD/MWD Acquisition Agreement and the MWD/CVWD Transfer and Exchange Agreement.

2.3 MWD Water Budget.

(1) **MWD Priority 4 and 5 Cap.** MWD's Consumptive Use entitlements under Priorities 4 and 5 are capped by this Agreement at five hundred fifty thousand (550,000) AFY, and six hundred sixty-two thousand (662,000) AF, respectively, at Lake Havasu, less the water made available under paragraph (2) of this Section 2.3 to the extent charged to Priority 4 or 5. This cap shall be subject to adjustment in any Year to the extent permitted under or required by the Inadvertent Overrun and Payback Policy. Water made available by MWD to CVWD in any Year pursuant to this Agreement shall be charged at MWD's option to any water available to MWD in that Year. Any Colorado River water acquired from any Party pursuant to a transaction contemplated by this Agreement or permitted to be acquired under Section 4.3 hereof shall be in addition to this cap.

(2) **Miscellaneous and Indian PPR's.** MWD shall forbear Consumptive Use when necessary, in conjunction with the Inadvertent Overrun and Payback Policy, to permit the Secretary to make available for Consumptive Use by holders of miscellaneous and Indian present perfected Colorado River water rights the aggregate amount necessary to satisfy individually their respective present perfected rights to Colorado River water in excess of fourteen thousand

five hundred (14,500) AFY. MWD's obligation to forbear Consumptive Use for this purpose shall be charged at MWD's option to any Priority pursuant to which MWD has water available.

(3) **[Intentionally Not Used]**

(4) **Priorities 1 & 2 Consumptive Use Over and Under 420,000 AF.** MWD shall be responsible when necessary, in conjunction with the Inadvertent Overrun and Payback Policy, for repayment of any overrun as a result of aggregate use by Priorities 1, 2 and 3b in excess of four hundred twenty thousand (420,000) AFY; and to the extent that Priorities 1, 2 and 3b use is less than four hundred twenty thousand (420,000) AFY, MWD shall have the exclusive right to Consumptively Use such unused water.

(5) **Acquisitions From IID.** The terms and conditions applicable to the acquisition of Conserved Water by MWD from IID, as contemplated by this Agreement, shall be as set forth in the IID/MWD Acquisition Agreement and the Allocation Agreement.

(6) **Acquisition From CVWD.** The terms and conditions of the acquisition of water by MWD from CVWD, as contemplated by this Agreement, shall be as set forth in the MWD\CVWD Transfer and Exchange Agreement and the Allocation Agreement.

(7) **Acquisition by CVWD.** The terms and conditions of the acquisition of water and entitlement to water by CVWD from MWD, as contemplated by this Agreement, shall be as set forth in the CVWD/MWD Acquisition Agreement and the MWD/CVWD Transfer and Exchange Agreement.

(8) **Contractual Commitment to SDCWA.** The terms and conditions of the delivery of certain Conserved Water to SDCWA by MWD shall be as set forth in the SDCWA/MWD Exchange Agreement.

ARTICLE 3 TERM/CLOSING/EFFECTIVE DATE

3.1 **Term.** This Agreement shall commence on the Effective Date and shall terminate on the Termination Date.

3.2 **Closing Date.** The Execution of this Agreement and the Execution of each of the Related Agreements that is dated as of the Closing Date shall be deemed to have been Executed simultaneously at 12:00 PM PST on the Closing Date. No Party shall take a position in any administrative, judicial or legislative forum contrary to or inconsistent with the foregoing.

3.3 **Effective Date.** Notwithstanding any other provision of this Agreement, the obligations of the Parties under Articles 2 and 4, and under the related provisions of the Acquisition Agreements and the Implementation Agreement contemplated by this Agreement, shall be contingent upon the occurrence of, and shall not become effective until, the Effective Date.

3.4 Early Termination.

(1) In the event of Non-consensual Termination of the 1998 IID/SDCWA Transfer Agreement:

(i) **Advance Notice.** IID shall, to the extent reasonably possible, give the other Parties, SWRCB, BOR and the Secretary at least twelve (12) months advance written notice of such event together with a written explanation of the underlying factors and calculations;

(ii) **[Intentionally Not Used]**

(iii) **[Intentionally Not Used]**

(2) In the event of a Transfer Stoppage, the Parties shall proceed in the manner required under Section 6.1 hereof and shall seek to overturn, modify or otherwise remedy such Transfer Stoppage to the satisfaction of each Party materially affected thereby. If the Parties are unable to do so, they shall in good faith negotiate among themselves and with the SDCWA and the Secretary to determine whether to continue this Agreement and the Related Agreements that are coterminous with this Agreement notwithstanding the Transfer Stoppage and, if so, with what modifications if any.

(3) **[Intentionally Not Used]**

(4) **Effect of Termination.** As of the Termination Date, neither the terms of this Agreement nor the conduct of the Parties in performance of this Agreement shall be construed to enhance or diminish the rights of any of the Parties as such rights existed at the Closing Date, including any enhancement or diminishment by reason of an alleged application of common law principles of reliance, estoppel, intervening public use, domestic or municipal priority, shortage or emergency, or equitable apportionment. Notwithstanding any provision to the contrary in this Agreement, or in the Implementation Agreement, all water budget components contemplated under Article 2 of this Agreement and all state and federal approvals, permits and water contract amendments issued or adopted in connection therewith, other than environmental related permits with continuing mitigation obligations, shall thereupon terminate by consent of each of the Parties, which consents are hereby given, and which consents shall be reaffirmed in writing at the request of any Party, and the rights of the Parties shall revert to the status quo as though the Parties had never entered into, or intended to enter into, this Agreement, the Acquisition Agreements, or the Implementation Agreement. Notwithstanding anything to the contrary in this Agreement, the parties stipulate and agree that the provisions of Section 4.1 of this Agreement, the provisions of Section 16.2 of the IID/MWD Acquisition Agreement, the provisions of Section 14.3(2) of the IID/CVWD Acquisition Agreement, and the provisions of Sections 14.3 and 14.4 of the 1998 IID/SDCWA Transfer Agreement will remain in force and effect.

**ARTICLE 4
ADDITIONAL SETTLEMENT PROVISIONS**

4.1 General Settlement Provisions; No Admission of Settlement Terms; Reservation of Rights and Claims.

The Parties do not agree on the nature or scope of their relative rights to the delivery, use or transfer of Colorado River water. This Agreement is a consensual, comprehensive settlement arrangement acceptable to all Parties. It does not reflect any Party's rights or claims singularly or collectively, nor does it reflect the anticipated, predicted or possible outcome to any of the many disputes between the Parties if they were to be resolved without consensus. The Parties acknowledge that this Agreement is, in fact, a settlement and thus may not be used for any purpose in any judicial, legislative or administrative proceeding, and may not be used in any future attempt to reallocate water or water rights or to reorder the priorities of the Parties upon the termination of this Agreement. Subject to the provisions of this Agreement which compromise such matters, the legal rights, duties, obligations, powers and claims of each Party are preserved and may be acted upon by any Party during the term of this Agreement.

4.2 All-American Canal and Coachella Canal Lining Projects Conserved Water.

(1) The Parties agree that sixty seven thousand seven hundred (67,700) AFY and twenty six thousand (26,000) AFY of Conserved Water from the completed All-American Canal Lining Project and the Coachella Canal Lining Project, respectively, shall be distributed subject to the terms of the Allocation Agreement.

(2) [Intentionally Not Used]

(3) [Intentionally Not Used]

(4) [Intentionally Not Used]

(5) [Intentionally Not Used]

4.3 Other Acquisitions of Colorado River Water. During the period from the Effective Date to the Termination Date, the Parties may acquire Colorado River water from any person, without objection by any of the Parties, so long as any such acquisition is not inconsistent with any other term of this Agreement or the Related Agreements and does not materially reduce the water available to the Parties.

4.4 [Intentionally Not Used]

4.5 CVWD Utilization of Water.

(1) Other than as provided in Section 3.6 of the IID/CVWD Acquisition Agreement, CVWD shall not utilize its water budget to facilitate any water use outside of Improvement District No. 1 other than for direct and in lieu groundwater recharge, and shall use its best efforts to utilize its water budget to address the groundwater overdraft problem in Improvement District No. 1 and to implement a program that is designed to achieve a safe yield

within Improvement District No. 1 by the end of CVWD's water budget ramp-up in approximately Year 30.

(2) IID and MWD shall not object to the utilization of Colorado River water in the Coachella Valley, but outside Improvement District No. 1, in order to maximize the effectiveness of Improvement District No. 1's water use and recharge programs.

(3) CVWD shall make no claim as a matter of right to any additional Colorado River water in Priorities 3 or 6.

(4) This Agreement does not affect CVWD's rights under its surplus contract with the Secretary dated March 6, 1987, including its right to use water delivered under that contract anywhere within its boundaries.

4.6 CVWD Groundwater Storage of IID Water. Subject to the physical availability of storage in the Coachella Valley after accounting for the storage to be utilized by CVWD for the MWD/CVWD conjunctive use program, if implemented, CVWD will provide groundwater storage for IID's use in accordance with the IID/CVWD Acquisition Agreement.

4.7 Shortage and Sharing of Reduced Water Availability. If for any reason there is less than 3.85 million (3,850,000) AF available to Priorities 1, 2 and 3 in any Year, there will be no termination of this Agreement. Shortages will be shared pursuant to the particular provisions of the Acquisition Agreements and the Allocation Agreement.

4.8 Amendments to Acquisition Agreements. The Parties to each Acquisition Agreement shall have the right to amend that Agreement from time to time without the consent of any other Party hereto (a "non-signatory Party"); provided, however, that prompt notice and a copy of any such amendment is provided to each non-signatory Party, the Secretary, BOR and, with respect to the transfers to SDCWA contemplated under the 1998 IID/SDCWA Transfer Agreement and acquisitions from IID by CVWD under the IID/CVWD Acquisition Agreement, SWRCB; and provided, further, that no such amendment shall be given any force or effect, or be binding on any Party, if:

(1) such amendment would affect in any respect the rights of any non-signatory Party to Colorado River water; or

(2) such amendment could reasonably have a significant adverse effect on the interests of a non-signatory Party; unless or until

(3) in the circumstances of either (1) or (2), the written consent to such amendment shall have been obtained from each non-signatory Party, which consent shall not be unreasonably withheld and, if determined to have been unreasonably withheld, shall be effective retroactively to the date originally requested.

4.9 MWD Mitigation of Certain Effects of Interim Surplus Guidelines. In the event that Priority 3a Consumptive Use by IID and CVWD, consistent with and as adjusted by this Agreement, is reduced as a direct result of the application and operation of the Interim Surplus Guidelines, MWD will assume responsibility for any required payback of any water use

overruns by IID and CVWD resulting from such reduction. MWD's aggregate payback obligation under this Section 4.9 shall be limited to an amount equal to the aggregate amount of surplus water allocated to and Consumptively Used by MWD under Full Domestic Surplus and/or Partial Domestic Surplus conditions, as determined by the Secretary under the Interim Surplus Guidelines.

4.10 [Intentionally Not Used]

4.11 MWD Interim Surplus Guidelines Agreements With Arizona and Southern Nevada Water Authority. In connection with the implementation of the Interim Surplus Guidelines, MWD and the State of Arizona may enter into an Interim Surplus Guidelines Agreement and MWD and the Southern Nevada Water Authority have entered into an Interim Surplus Guidelines Agreement. Pursuant to such agreements MWD may be required to forbear delivery of a determinable quantity of Colorado River water in certain circumstances involving the Secretary's determination of a shortage condition in accordance with such Guidelines. IID and CVWD hereby agree to forbear exercise of any right or claim under Priorities 6 and 7, including any right or claim under this Agreement or a Related Agreement, to such water to the extent of any such required forbearance by MWD.

4.12 [Intentionally Not Used]

4.13 [Intentionally Not Used]

4.14 [Intentionally Not Used]

4.15 [Intentionally Not Used]

4.16 Public Awareness Program. The Parties will each implement and maintain a water conservation public awareness program.

**ARTICLE 5
REPRESENTATIONS AND WARRANTIES**

5.1 IID's Representations and Warranties.

(1) **Authority.** Subject only to the determinations and approvals contemplated by Section 6.2(2) of this Agreement and compliance with environmental laws as contemplated by Section 6.2(2) of this Agreement: (i) IID has all legal power and authority to enter into this Agreement and to perform its obligations hereunder on the terms set forth in this Agreement and (ii) the execution and delivery hereof by IID and the performance by IID of its obligations hereunder will not violate or constitute an event of default under the terms or provisions of any agreement, document or instrument to which IID is a party or by which IID is bound.

(2) **Signatories.** The persons executing this Agreement on behalf of IID have the full power and authority to bind IID to the terms of this Agreement. In addition, the persons signing this Agreement on IID's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on IID's behalf

personally warrant and represent that they have reviewed this Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability**. Subject only to the determinations and approvals contemplated by Section 6.2(2) of this Agreement, compliance with environmental laws as contemplated by Section 6.2(2) of this Agreement, and satisfaction or waiver of the conditions set forth in Section 6.2 of this Agreement, this Agreement constitutes a valid and binding agreement of IID, enforceable against IID in accordance with its terms.

(4) **No Pending or Threatened Disputes**. Except as disclosed in Appendix 5.1, attached to this Agreement, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to IID's knowledge, threatened against or affecting IID relating to the performance contemplated by this Agreement.

(5) **Notice of Developments**. IID agrees to give prompt notice to the Parties if IID discovers that any of its own representations and warranties were untrue when made.

5.2 CVWD's Representations and Warranties.

(1) **Authority**. Subject only to the determinations and approvals contemplated by Section 6.2(2) of this Agreement and compliance with environmental laws as contemplated by Section 6.2(2) of this Agreement: (i) CVWD has all legal power and authority to enter into this Agreement and to perform its obligations hereunder on the terms set forth in this Agreement and (ii) the execution and delivery hereof by CVWD and the performance by CVWD of its obligations hereunder will not violate or constitute an event of default under the terms or provisions of any agreement, document or instrument to which CVWD is a party or by which CVWD is bound.

(2) **Signatories**. The persons executing this Agreement on behalf of CVWD have the full power and authority to bind CVWD to the terms of this Agreement. In addition, the persons signing this Agreement on CVWD's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on CVWD's behalf personally warrant and represent that they have reviewed this Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability**. Subject only to the determinations and approvals contemplated by Section 6.2(2) of this Agreement, compliance with environmental laws as contemplated by Section 6.2(2) of this Agreement, and satisfaction or waiver of the conditions set forth in Section 6.2 of this Agreement, this Agreement constitutes a valid and binding agreement of CVWD, enforceable against CVWD in accordance with its terms.

(4) **No Pending or Threatened Disputes**. Except as disclosed in Appendix 5.2, attached to this Agreement, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to CVWD's knowledge, threatened against or affecting CVWD relating to the performance contemplated by this Agreement.

(5) **Notice of Developments.** CVWD agrees to give prompt notice to the Parties if CVWD discovers that any of its own representations and warranties were untrue when made.

5.3 MWD's Representations and Warranties.

(1) **Authority.** Subject only to the determinations and approvals contemplated by Section 6.2(2) of this Agreement and compliance with environmental laws as contemplated by Section 6.2(2) of this Agreement: (i) MWD has all legal power and authority to enter into this Agreement and to perform its obligations hereunder on the terms set forth in this Agreement and (ii) the execution and delivery hereof by MWD and the performance by MWD of its obligations hereunder will not violate or constitute an event of default under the terms or provisions of any agreement, document or instrument to which MWD is a party or by which MWD is bound.

(2) **Signatories.** The persons executing this Agreement on behalf of MWD have the full power and authority to bind MWD to the terms of this Agreement. In addition, the persons signing this Agreement on MWD's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on MWD's behalf personally warrant and represent that they have reviewed this Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability.** Subject only to the determinations and approvals contemplated by Section 6.2(2) of this Agreement, compliance with environmental laws as contemplated by Section 6.2(2) of this Agreement, and satisfaction or waiver of the conditions set forth in Section 6.2 of this Agreement, this Agreement constitutes a valid and binding agreement of MWD, enforceable against MWD in accordance with its terms.

(4) **No Pending or Threatened Disputes.** Except as disclosed in Appendix 5.3, attached to this Agreement, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to MWD's knowledge, threatened against or affecting MWD relating to the performance contemplated by this Agreement.

(5) **Notice of Developments.** MWD agrees to give prompt notice to the Parties if MWD discovers that any of its own representations and warranties were untrue when made.

ARTICLE 6 SPECIAL CONSIDERATIONS

6.1 QSA Premises. This Agreement and the Related Agreements that are Executed on the Closing Date are premised on, among other things, the special considerations set forth in Section 6.2. IID, MWD and CVWD shall each proceed cooperatively, in good faith, and with reasonable diligence and effort to secure, protect and defend each of such special considerations for which and to the extent it has responsibility under this Agreement or a Related Agreement.

6.2 Special Considerations.

(1) [Intentionally Not Used]

(2) Environmental Matters.

(i) **Environmental Review.** All environmental review and assessment required under CEQA, NEPA and applicable federal, state and agency regulations implementing the same have been completed, to the extent required to authorize implementation of the activities contemplated by this Agreement. An environmental review process will be deemed "completed" only when all required Notices of Determination pursuant to CEQA have been duly filed; all required Records of Decision pursuant to NEPA have been duly issued; all administrative appeal periods have expired; all statutes of limitation for filing an action challenging any environmental process pursuant to CEQA have expired; as of the deadline for satisfying these conditions, no action challenging any environmental process has been filed, or, if filed, has been resolved by a final judgment which upholds or sustains the environmental review process and allows implementation of the covered activities and all judicial appeal periods have expired. The environmental review processes described above shall include, but are not limited to:

(a) The federal EIS in connection with the Implementation Agreement, the Inadvertent Overrun and Payback Policy and this Agreement, to be prepared by BOR as the lead agency;

(b) The EIS relating to the Interim Surplus Guidelines, prepared by BOR as the lead agency;

(c) The program EIR relating to this Agreement, to be prepared by IID, MWD, CVWD and SDCWA as co-lead agencies;

(d) The joint EIR/EIS relating to the conservation and transfer by IID of up to three hundred thousand (300,000) AFY and IID's Priority 3 cap, to be prepared by IID as the lead agency under CEQA and BOR as the lead agency under NEPA;

(e) The joint EIR/EIS relating to the lining of the Coachella Canal, to be prepared by CVWD as the lead agency under CEQA, and by BOR as the lead agency under NEPA.

(f) Final approval by all necessary federal and state agencies of a mitigation plan, a cultural resources plan and any other documents required to allow implementation of the All-American Canal Lining project pursuant to a certified EIR/EIS for that project;

(g) Final approval by all necessary federal and state agencies of a mitigation plan, a cultural resource plan and any other documents required to allow implementation of the Coachella Canal Lining project pursuant to a certified EIR/EIS for that project; and

(h) The program EIR for the CVWD Groundwater Recharge project, to be prepared by CVWD as the lead agency.

(ii) **Resource Approvals.** All permits, approvals, authorizations, opinions, assessments and agreements pursuant to the federal Endangered Species Act ("ESA"), the California Endangered Species Act ("CESA") and any other federal or state environmental resource protection laws, and applicable federal or state regulations implementing the same (collectively "Resource Approvals"), have been finalized, to the extent required by such statutes or regulations or deemed necessary or appropriate by the U.S. Fish and Wildlife Service ("USFWS"), the California Department of Fish and Game ("CDFG"), BOR or IID to document compliance therewith and to authorize implementation of the 1998 IID/SDCWA Transfer Agreement, the conservation by IID of up to three hundred three thousand (303,000) AFY and IID's Priority 3a cap. A Resource Approval shall be deemed "final" only when all required environmental review has been completed as described in Section 6.2(2)(a) above; final action has been taken and all required documents have been approved and executed by the resource agencies and the applicant; all required biological assessments and biological opinions have been issued; all administrative appeal periods have expired; as of the deadline for satisfying these conditions, and no action challenging any Resource Approval has resulted in a Transfer Stoppage. The Resource Approvals described above shall include, but are not limited to, all required approvals by federal and state agencies of:

(a) The change in the point of diversion on the Colorado River and transfer of up to three hundred three thousand (303,000) AFY of water to be conserved by IID.

(b) Incidental take authorization pursuant to ESA and CESA, to the extent required to implement the change in the point of diversion on the Colorado River, the water transfers and acquisitions described above, the Interim Surplus Criteria, the Inadvertent Overrun and Payback Policy, the All-American Canal Lining project, and the Coachella Canal Lining project. The effective date for the CESA permit shall be January 1, 2004, provided however that the CDFG acknowledges in writing by the Closing Date that activities to occur in Year 1 pursuant to this Agreement and the Related Agreements will not result in any take of any species requiring a "take permit."

(iii) **Party Approvals of Environmental Requirements.** Each Party, by action of its governing board, has approved and accepted the terms, conditions and mitigation measures of the environmental review processes described in Section 6.2(2)(i) above and the Resource Approvals described in Section 6.2(2)(ii) above (collectively, "Environmental Requirements"), to the extent such Party is responsible, in whole or in part, for compliance, performance or payment of the costs of such Environmental Requirements.

(3) **Transfer Stoppage.** The absence of any Transfer Stoppage during the term of this Agreement.

(4) **Inadvertent Overrun and Payback Policy.** The adoption and continuation by BOR of standards and procedures for an Inadvertent Overrun and Payback

Policy that is in all material respects in conformity with the current Program, subject to modification only as and to the extent contemplated under the Implementation Agreement.

(5) **Reinstatement of Interim Surplus Guidelines.** The reinstatement and continuation of the terms of the Interim Surplus Guidelines, originally implemented pursuant to the Secretary's Record of Decision dated January 16, 2001, by the Closing Date.

(6) **Intentionally Not Used**

(7) **Intentionally Not Used**

(8) **Intentionally Not Used**

(9) **Intentionally Not Used**

(10) **Intentionally Not Used**

(11) **SWRCB Approval.** The adoption and continuation in full force and effect of the SWRCB Order, as the same may be amended from time to time in a manner and to the extent acceptable to the Parties.

(12) **Intentionally Not Used**

(13) **QSA Legislation.** The continuation of the QSA Legislation in full force and effect without material modification.

(14) **Intentionally Not Used**

(15) **Litigation.** Any pending or threatened litigation, including disputes disclosed in Appendices 5.1, 5.2 or 5.3 hereof, that would, if finally determined in favor of any complaining person or person, materially and adversely affect (a) the ability of any Party to perform under this Agreement or the Related Agreements (b) the continuing efficacy of the Inadvertent Overrun and Payback Policy, the Interim Surplus Guidelines, or the SWRCB's final order of approval referenced in Section 6.2 (11) hereof, or (c) the ability of the Secretary (or the Secretary's delegate) to perform under the Implementation Agreement, shall become the subject of one or more joint defense agreements among two or more of the Parties and, where applicable SDCWA, reasonably allocating responsibilities to a Party or Parties or SDCWA for the defense of (or intervention in) such litigation and, where appropriate, for the potential consequences of any materially adverse final determination of such litigation or otherwise specifying the consequences of any such determination.

(16) **Failure of Consideration.** The Parties hereby stipulate and agree that a material failure of any special considerations set forth in Section 6.2 shall constitute an irreparable injury to each Party and shall also constitute irreparable harm to the public interest, whether or not there has been a related breach of Section 6.1 by any Party.

6.3 Waiver of Compliance. No Party shall waive compliance with CEQA, NEPA or other requirements under applicable laws.

ARTICLE 7
[INTENTIONALLY NOT USED]

7.1 [Intentionally Not Used]

(1) **[Intentionally Not Used]**

ARTICLE 8
[INTENTIONALLY NOT USED]

8.1 [Intentionally Not Used]

(1) **[Intentionally Not Used]**

(2) **[Intentionally Not Used]**

ARTICLE 9
[INTENTIONALLY NOT USED]

9.1 [Intentionally Not Used]

(1) **[Intentionally Not Used]**

(2) **[Intentionally Not Used]**

(3) **[Intentionally Not Used]**

ARTICLE 10
REMEDIES

10.1 Specific Performance. Each Party recognizes that the rights and obligations of the Parties under this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party does not perform in accordance with this Agreement, the other Parties will likely suffer harm curable only by the imposition of an injunction requiring specific performance. Thus, each of the Parties agrees that any breach of this Agreement by any Party shall entitle the non-breaching Parties, or any one of them, to injunctive relief, including but not limited to a decree of specific performance, in addition to any other remedies at law or in equity that may be available in the circumstances.

10.2 Cumulative Rights and Remedies. The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delays in exercising any such right or remedy, the non-breaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power or privilege

precludes any other or further exercise of a right, power or privilege granted by this Agreement or otherwise.

10.3 Action or Proceeding between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against another Party would, under § 394(a) of the CCP, as a matter of law be subject to:

- (1) being transferred to a Neutral County, or instead
- (2) having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.
- (3) In the event an action is filed by any Party against another Party or Parties to enforce this Agreement and to obtain damages for its alleged breach, each Party hereby:
- (4) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action;
 - (i) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;
 - (ii) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and
 - (iii) Acknowledges that this Agreement, and in particular this Section 10.3, may be submitted to the court as part of the moving papers.
- (5) Nothing in this Section 10.3, however, shall impair or limit the ability of a Party to contest the suitability of any particular county to serve as a Neutral County, or shall operate to waive any other rights.

ARTICLE 11 GENERAL PROVISIONS

11.1 Notices. All notices, requests, demands, or other communications under this Agreement must be in writing, and sent to the addresses of each Party set forth below. Notice will be sufficiently given for all purposes as follows:

Personal Delivery. When personally delivered to the recipient. Notice is effective on delivery.

Certified Mail. When mailed certified mail, return receipt requested. Notice is effective on receipt, if a return receipt confirms delivery.

Overnight Delivery. When delivered by an overnight delivery service such as Federal Express, charges prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.

Facsimile Transmission. Notice is effective on receipt, provided that the facsimile machine provides the sender a notice that indicates the transmission was successful, and that a copy is mailed by first-class mail on the facsimile transmission date.

Addresses for purpose of giving notice are as follows:

To IID:	Imperial Irrigation District Attn.: General Manager
<i>Address for U.S. Mail</i>	P.O. Box 937 Imperial, CA 92251
<i>Address for Personal or Overnight Delivery:</i>	333 E. Barioni Boulevard Imperial, CA 92251
	Telephone: 760-339-9477 Facsimile: 760-339-9392

With a copy delivered by the same means to:

Horton, Knox, Carter & Foote
895 Broadway
El Centro, CA 92243
Attention: John P. Carter, Esq.

Telephone: 760-352-2821
Facsimile: 760-352-8540

To MWD:	The Metropolitan Water District of Southern California Attn.: Chief Executive Officer
<i>Address for U.S. Mail</i>	P.O. Box 54153 Los Angeles, CA 90054
<i>Address for Personal or Overnight Delivery:</i>	700 North Alameda Street Los Angeles, CA 90012-2944
	Telephone: 213-217-6000 Facsimile: 213-217-6950

With a copy delivered by the same means and at the same address to:

The Metropolitan Water District of Southern
California
Attn: General Counsel

To CVWD: Coachella Valley Water District
Attn.: General Manager-Chief Engineer

Address for U.S. Mail P.O. Box 1058
Coachella, CA 92236

*Address for Personal or
Overnight Delivery:* Highway 111 and Avenue 52
Coachella, CA 92236

Telephone: 760-398-2651
Facsimile: 760-398-3711

With a copy delivered by the same means to:

Redwine & Sherrill
1950 Market Street
Riverside, CA 92501

Telephone: 909-684-2520
Facsimile: 909-684-9583

(1) A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

(2) A Party may change its address by giving the other Parties notice of the change in any manner permitted by this Agreement.

11.2 Waiver. No waiver of a breach, failure of condition, or any right or remedy contained in or granted by the provisions of this Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right or remedy. No waiver of a breach, failure of condition or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

11.3 Post-Closing Notices. Each Party will give the other Parties prompt notice from time to time after the Closing Date and prior to the Termination Date of any actions, suits, legal or administrative proceedings, or governmental investigations pending or, to such Party's knowledge, threatened against or affecting any Party relating to the performance contemplated by this Agreement and the Related Agreements.

11.4 Counterparts. This Agreement may be executed in three or more counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

11.5 No Third-Party Rights. This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

11.6 Ambiguities. Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

11.7 Alterations in PPI or GDPIPD Inflation Indices. If the publication of the Producer Price Index for the Materials and Components for Construction (ID #WPUSOP2200) or if the publication of the Gross Domestic Product Implicit Price Deflator is altered in some manner, including changing the name of the index, the geographic area covered, or the base year, the Parties will use their reasonable best efforts to agree on a substitute index or procedure that reasonably reflects the change in the level of producer prices for the materials and components for construction, or the change in the level of prices for goods and services included in the calculation of the United States Gross Domestic Product, as applicable.

11.8 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to conflict of law provisions; provided, however, that federal law shall be applied as appropriate to the extent it bears on the resolution of any claim or issue relating to the permissibility of the acquisitions of Colorado River water contemplated herein.

11.9 Binding Effect; No Assignment. This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. No Party may Assign any of its rights or Delegate any of its duties under this Agreement or the Related Agreements, and any such Assignment or Delegation made in violation of this Section 11.9 shall be void and of no force or effect.

11.10 Joint Defense. The Parties agree to cooperate, to proceed with reasonable diligence, and to use reasonable best efforts to defend any lawsuit or administrative proceeding challenging the legality, validity or enforceability of any term of this Agreement, or any Party's right to act in accordance with any of the terms of this Agreement. Except as otherwise provided in the ECSA, or under an agreement referenced in Section 6.2(15), each Party shall bear its own costs of participation and representation in any such defense.

11.11 Entire Agreement. This Agreement (including the exhibits and other agreements attached to and referenced in this agreement) constitutes the final, complete, and exclusive statement of the terms of the Agreement among the Parties pertaining to its subject matter and supersedes all prior and contemporaneous understandings or agreements of the Parties. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

11.12 Modification. This Agreement may be supplemented, amended, or modified only by the written agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by all Parties.

IN WITNESS WHEREOF, IID, CVWD AND MWD have executed this Agreement as of the day and year first written above.

Approved as to form:

By: *[Signature]*

Its: Chief Counsel

IMPERIAL IRRIGATION DISTRICT

By: *[Signature]*

Its: President

By: *[Signature]*

Its: Secretary

By: *[Signature]*

Its: General Counsel

COACHELLA VALLEY WATER DISTRICT

By: *[Signature]*

Its: General Manager-Chief Engineer

By: *[Signature]*

Its: GENERAL COUNSEL

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By: *[Signature]*

RONALD R. GASTELUM
Chief Executive Officer

EXHIBIT A

EXHIBIT A

QSA-RELATED AGREEMENTS¹

Quantification Settlement Agreement dated October 10, 2003

Colorado River Water Delivery Agreement dated October 10, 2003

Allocation Agreement Among the United States of America; The Metropolitan Water District of Southern California; Coachella Valley Water District; Imperial Irrigation District; San Diego County Water Authority; The La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians; the San Luis Rey Indian Water Authority; The City of Escondido and Vista Irrigation District dated October 10, 2003

Agreement for Transfer of Conserved Water by and between Imperial Irrigation District and San Diego County Water Authority dated April 29, 1998

Revised Fourth Amendment to Agreement Between Imperial Irrigation District and San Diego County Water Authority for Transfer of Conserved Water dated October 10, 2003

Delivery and Exchange Agreement Between Metropolitan and Coachella for 35,000 Acre-Feet dated October 10, 2003

Agreement For Acquisition of Water Between Coachella Valley Water District and The Metropolitan Water District of Southern California dated October 10, 2003

Agreement for Acquisition of Conserved Water by and between Imperial Irrigation District and The Metropolitan Water District of Southern California dated October 10, 2003

Agreement for Acquisition of Conserved Water by and between Imperial Irrigation District and Coachella Valley Water District dated October 10, 2003

Quantification Settlement Agreement Joint Powers Authority Creation and Funding Agreement dated October 10, 2003

¹ Exhibits to such Agreements are included even without express reference.

Environmental Cost Sharing, Funding and Habitat Conservation Plan Development Agreement dated October 10, 2003

Conservation Agreement Among the Bureau of Reclamation, Imperial Irrigation District, Coachella Valley Water District and San Diego County Water Authority dated October 10, 2003

Funding Agreement Among the Bureau of Reclamation, the Metropolitan Water District of Southern California and the San Diego County Water Authority Regarding Implementation of Conservation and Mitigation Measures Identified in United States Fish and Wildlife Service Biological Opinion dated January 12, 2001, "For Interim Surplus Criteria (Hereinafter "Guidelines"), Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary Arizona, California, and Nevada" dated October 10, 2003

Agreement Between The Metropolitan Water District of Southern California and the San Diego County Water Authority Regarding Allocation of the Benefits of the Biological Opinion for Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary, Arizona, California, and Nevada, dated January 12, 2001

Agreement for the Conveyance of Water Among the San Diego County Water Authority, the San Luis Rey Settlement Parties, and the United States

Amendment to the Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water between the Imperial Irrigation District and the Metropolitan Water District of Southern California dated October 10, 2003

Amendment to the Approval Agreement Among the Imperial Irrigation District, the Metropolitan Water District of Southern California, Palo Verde Irrigation District, and Coachella Valley Water District dated October 10, 2003

Amendment to the Agreement to Supplement Approval Agreement Between the Metropolitan Water District of Southern California and Coachella Valley Water District dated October 10, 2003

IID and CVWD Consent Letter to MWD/PVID Water Transfer Program dated October 10, 2003

Amended and Restated Agreement Between The Metropolitan Water District of Southern California and the San Diego County Water Authority for the Exchange of Water, dated October 10, 2003

MWD/DFG Special Surplus Payment Agreement

DWR letter re Delivery and Exchange Agreement between Metropolitan and Coachella for 35,000 Acre-Feet, dated October 10, 2003

EXHIBIT B

EXHIBIT B²

**AGREEMENTS EXECUTED BUT CONTINGENT ON PERMITS, APPROVALS OR
CONSENTS, OR TO BE SIGNED AFTER THE QSA EXECUTION**

Stipulation for Dismissal and Order Thereon, IID v. USA, et al., Case No. 03cv0069 W(JFS),
United States District Court, Southern District of California

The 2003 Exchange Agreement by and between Coachella Valley Water District and the
Metropolitan Water District of Southern California dated _____

Agreement Between the Imperial Irrigation District and the Department of Water Resources for
the Transfer of Colorado River Water dated October 10, 2003

Agreement Between the Metropolitan Water District of Southern California and the Department
of Water Resources for the Transfer of Colorado River Water dated October 10, 2003

DFG Take Permits

USFWS Take Permits

SWRCB consent to modification of IID/SDCWA transfer mitigation for first 15 years

Amendments No. 27 and No. 28 to the Water Supply Contract Between the State of California
Department of Water Resources and Metropolitan Water District of Southern California

Amendment No. 18 to the Water Supply Contract Between the State of California Department of
Water Resources and Coachella Valley Water District

Amendment No. 18 to the Water Supply Contract Between the State of California Department of
Water Resources and Desert Water Agency

² Exhibits to such Agreements are included even without express reference.

EXHIBIT C

EXHIBIT C
COMPROMISE IID/SDCWA AND QSA DELIVERY SCHEDULE

Agmt Yr	Cal Yr	IID/SD (KAF)	IID/CVWD (KAF) ¹	IID/MWD (KAF)	Total Delivery (KAF)	Total Efficiency (KAF)	Fallowing for Delivery (KAF)	Mitigation Fallowing (KAF)	Total Fallowing (KAF)
1	2003	10	0	0	10	0	10	5	15
2	2004	20	0	0	20	0	20	10	30
3	2005	30	0	0	30	0	30	15	45
4	2006	40	0	0	40	0	40	20	60
5	2007	50	0	0	50	0	50	25	75
6	2008	50	4	0	54	4	50	25	75
7	2009	60	8	0	68	8	60	30	90
8	2010	70	12	0	82	12	70	35	105
9	2011	80	16	0	96	16	80	40	120
10	2012	90	21	0	111	21	90	45	135
11	2013	100	26	0	126	46	80	70	150
12	2014	100	31	0	131	71	60	90	150
13	2015	100	36	0	136	96	40	110	150
14	2016	100	41	0	141	121	20	130	150
15	2017	100	45	0	145	145	0	150	150
16	2018	130	63	0	193	193	0	0	0
17	2019	160	68	0	228	228	0	0	0
18	2020	192.5	73	2.5	268	268	0	0	0
19	2021	205	78	5.0	288	288	0	0	0
20	2022	202.5	83	2.5	288	288	0	0	0
21	2023	200	88	0	288	288	0	0	0
22	2024	200	93	0	293	293	0	0	0
23	2025	200	98	0	298	298	0	0	0
24	2026	200	103	0	303	303	0	0	0
25	2027	200	103	0	303	303	0	0	0
26	2028	200	103	0	303	303	0	0	0
27-45	2029-2047	200	103	0	303	303	0	0	0
46-75	2048-2077	200	50	0	250	250	0	0	0

¹ or MWD if CVWD declines to acquire.

EXHIBIT 5

Appendix 5.1

IID's Pending and Threatened Litigation Disclosure

The following actions, suits, legal or administrative proceedings, or governmental investigations are pending, or (to IID's knowledge) have been threatened relating to the performance of this Agreement. By listing the items here, IID does not imply that any of these matters have merit and, in fact, IID disputes the legitimacy of all the below matters. They are provided here simply as a disclosure of their existence or threat, per the Agreement.

1. United States Part 417 Proceeding (2003) -- IID is currently engaged in a dispute with the United States over IID's 2003 water order, with an appeal to the Secretary of the Interior from the Regional Director's Final Determination due to be filed later this month. The 2003 Part 417 review of IID will be terminated by the United States and IID's order approved as part of the QSA settlement.
2. United States Part 417 Proceeding (Future Years) -- Though IID disputes the legal ability of the United States to review IID's water use under Part 417, the United States contends that it has the right to review IID's water use under that regulation on a yearly basis. In future years such review is required to be in compliance with obligations of the United States in the QSA package of documents, and IID and the United States have reserved their litigation rights.
3. IID v. United States, et al. (Case No. 03 CV 0069W (JFS), Southern District California) This case pertains to IID's 2003 water order. It is currently stayed and will be dismissed as part of the overall QSA settlement.
4. Reasonable Beneficial Use Lawsuits/Actions By Junior Appropriators and Others -- Junior appropriators MWD and CVWD have threatened to sue IID over its reasonable beneficial use of water. The QSA settlement controls MWD's and CVWD's rights to commence such proceedings during the QSA. Other entities not constrained by the QSA may sue IID.
5. Morgan, et al. v. Imperial Irrigation District (Case No. L-01510, Superior Court of California, Imperial County)-- This is a lawsuit against IID and "All Persons Interested" brought by certain landowners in IID. This "Morgan Group" of plaintiffs consists of disgruntled landowners in the Imperial Valley who have asserted in this case, and/or in other places at other times, the following general issues: (a) they have "revoked" their status as beneficiaries and thus IID has no authority over Colorado River water; (b) IID has mismanaged its water right; (c) the landowners have the right to make their own deals with third parties to transfer water outside the IID service area; (d) IID cannot agree to the QSA without landowner consent; (e) methods being discussed by IID to implement the conservation programs required under the QSA documents are unfair and improper; (f) other similar complaints about IID and its management.
6. Imperial Valley Actions -- Many residents, landowners, farmers, and groups in the Imperial Valley are not in agreement with IID over the terms of the QSA, and have threatened to take action. The exact nature and extent of such possible action is unknown to IID.

7. Environmental Lawsuits/Actions -- Though the QSA and transfers were subject to extensive environmental review and provide for extensive environmental mitigation, various environmental groups and citizens have asserted that mitigation is inadequate or that the environmental documentation is inadequate. The exact nature and extent of such possible action is unknown to IID.

8. Lining Of All American Canal -- Many persons, both in the United States and in Mexico, appear to use groundwater that is being supplied by seepage from the All-American Canal. Lining will reduce access to seepage groundwater once the canal is lined. Persons have complained about this situation, and it is possible that such persons (and perhaps Mexico) will attempt to stop such lining.

9. Indian Tribes -- Certain Indian tribes border the Colorado River and have complained in the past to IID that any reductions in IID water orders so that more water can be taken by MWD or SDCWA at Parker Dam will adversely affect their power generation and their on-river wildlife habitat.

APPENDIX 5.2

NO PENDING OR THREATENED DISPUTES

There are no actions, suits, legal or administrative proceedings, or governmental investigations pending or threatened against or affecting CVWD which would adversely impact CVWD's ability to undertake the performance contemplated by this Agreement other than the following:

1. A general threat by the Center for Biological Diversity to sue challenging QSA transfers and environmental mitigation.
2. The Navajo Nation vs. United States Department of the Interior, et al., USDC for the District of Arizona, Case No. CIV 03 0507 PCTPG.
3. The Morgan Group lawsuit against IID.
4. The County of Imperial suit under CEQA challenging the State Water Resources Control Board Order Conditionally Approving the IID - SDCWA transfer and the CVWD/MWD acquisition.

QUANTIFICATION SETTLEMENT AGREEMENT
JOINT POWERS AUTHORITY
CREATION AND FUNDING AGREEMENT

This Quantification Settlement Agreement Joint Powers Authority Creation and Funding Agreement ("Agreement") is dated for reference this 10th day of October, 2003 and made by and among the STATE OF CALIFORNIA acting by and through the DEPARTMENT OF FISH AND GAME ("State"), the COACHELLA VALLEY WATER DISTRICT, ("CVWD"), the IMPERIAL IRRIGATION DISTRICT, ("IID") and the SAN DIEGO COUNTY WATER AUTHORITY, ("SDCWA"). The State, CVWD, IID and SDCWA are sometimes referred to herein, individually and collectively as the "Party" or "Parties". This Agreement is the QSA JPA as referenced in the QSA and the Environmental Cost Sharing Agreement.

RECITALS:

A. The Department of Fish and Game is a state agency formed pursuant to California Fish and Game Code section 700, *et seq.*, and is authorized by the Legislature to enter into this agreement on behalf of the State.

B. The CVWD is a county water district organized under the California County Water District Law.

C. The IID is an irrigation district organized under the California Irrigation District Law.

D. The SDCWA is a county water authority organized under the California County Water Authority Act.

E. Each of the Parties herein is a public agency. Each of the Parties herein is authorized and empowered to contract with the other Parties for the joint exercise of powers under California Joint Exercise of Powers Act and Section 3 of 2003 Stats., ch. 613 (SB 654, Machado) ("SB 654"). A copy of SB 654 is attached to this Agreement as Exhibit A.

F. SB 654 established a mechanism to implement and allocate environmental mitigation cost responsibility among IID, CVWD, SDCWA, and the State for the implementation of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. Costs for environmental mitigation requirements up to and not to exceed a present value of \$133,000,000 shall be borne by IID, CVWD, and SDCWA, with the balance to be borne by the State. Similarly, SB 654 limits the responsibility for payments by IID, CVWD and SDCWA for Salton Sea restoration to a present value of \$30,000,000, in addition to any payments under the provisions of subdivision (c) of Section 2081.7 of the Fish and Game Code, subdivision (f) of Section 1013 of the Water Code, and subdivision (b) of Section 3 of SB 654.

G. IID, CVWD and SDCWA are entering this Agreement in reliance upon, and this Agreement is intended to implement, the provisions of SB 654 which allocates the costs and authorizes the State to accept responsibility for certain environmental mitigation costs. This

Agreement creates the Quantification Settlement Agreement Joint Powers Authority and establishes the respective obligations and limitations of each of the Parties for funding of the joint powers authority and the costs of environmental mitigation. In addition, this agreement establishes certain obligations and limitations related to the costs of Salton Sea Restoration.

H. On or about October 10, 2003, CVWD, IID, and The Metropolitan Water District of Southern California executed that certain Quantification Settlement Agreement ("QSA") which settles a variety of long-standing Colorado River disputes regarding the priority, use and transfer of Colorado River water, establishes the terms for the further distribution of Colorado River water among those entities for a period of time based upon the water budgets set forth therein and includes as a necessary component thereof the implementation of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. These conserved water transfers and the QSA are critical components of the State's efforts to comply with the California Limitation Act of 1929, Section 4 of the Boulder Canyon Project Act of 1928 and to implement the California Constitutional mandate of Article X, Section 2. Neither the QSA or these conserved water transfers could be implemented without compliance with extensive state and federal environmental laws, and this Agreement including the State Obligation is the principal mechanism for ensuring that required mitigation under those laws for these transfers will be fully paid for.

I. The terms of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement are subject to the implementation of a mechanism to resolve and allocate environmental mitigation responsibility between those Parties on the terms and conditions set forth in that certain Environmental Cost Sharing, Funding and Habitat Conservation Plan Development Agreement among CVWD, IID, and SDCWA ("ECSA"). A copy of the ECSA is attached to this Agreement as Exhibit B.

J. This Agreement is necessary to (1) allocate among the State, the CVWD, the IID and the SDCWA Environmental Mitigation Costs; (2) make certain and limit the financial liability of the CVWD, the IID and the SDCWA for Environmental Mitigation Costs; (3) make certain and limit the financial liability of the CVWD, the IID and the SDCWA for Salton Sea restoration costs; and (4) allocate the remaining financial and other risks associated with the Environmental Mitigation Requirements and Salton Sea restoration costs to the State.

K. CVWD, IID and SDCWA have agreed to substantial commitments of water, money, and other valuable resources to implement the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, among which are commitments of funds to mitigate environmental impacts of those agreements and to promote restoration of the Salton Sea. These commitments would not have been made without the promises of the State as documented in this Agreement. In addition, IID, CVWD and SDCWA are relying upon this Agreement in entering into other agreements with third parties, including without limitation, contracts with landowners and farmers in the Imperial Valley who are to produce conserved water.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS, PROMISES AND THE PROVISIONS, CONDITIONS AND TERMS PROVIDED HEREIN, THE PARTIES HERETO AGREE AS FOLLOWS:

ARTICLE I

DEFINITIONS AND PRELIMINARY PROVISIONS

1.1 Definitions.

As used in this Agreement, capitalized terms not defined below shall have the meaning set forth in the ECSA and, if not defined therein, in the QSA.

a. “Canal Lining Project” shall mean the design and construction of lining in portions of the All-American Canal and the Coachella Canal, as authorized by Public Law 100-675, which qualifies for funding pursuant to the California Water Code sections 12560, *et seq.* as amended by Section 1 of 2003 Stats., ch. 613 (SB 654, Machado).

b. “Environmental Mitigation Cost Limitation” shall mean (i) a present value equal to \$133,000,000 of the payments by the CVWD, the IID and the SDCWA pursuant to this Agreement. Environmental Mitigation Cost Limitation with respect to the CVWD, the IID or the SDCWA, separately, shall mean the individual obligation for a portion of the amount of \$133,000,000 allocated to each agency respectively by Article IX of this Agreement. When used in the context of the Environmental Mitigation Cost Limitation, the words “liable” or “liability” mean any responsibility or obligation arising out of or related to any claim, demand, cause of action, cost, expense, condition or restriction, and shall include, without limitation, damages, fees, fines, penalties, assessments, permit conditions, litigation cost, attorneys’ fees, administrative requirements, in-kind contributions, adaptive management requirements, and cost-sharing requirements.

c. “Restore” and “Restoration” shall have the same meaning as such terms are used in the QSA Legislation.

d. “Salton Sea Restoration Limit” shall mean a present value equal to \$30,000,000 of the payments made by the CVWD, the IID or the SDCWA to the Salton Sea Restoration Fund. Salton Sea Restoration Limit with respect to the CVWD, the IID or the SDCWA, separately, shall mean the individual obligation for a portion \$30,000,000 limit for each agency respectively by Article XIV of this Agreement. When used in the context of the Salton Sea Restoration Limit, the words “liable” or “liability” mean any responsibility or obligation arising out of or related to any claim, demand, cause of action, cost, expense, condition or restriction, and shall include, without limitation, damages, fees, fines, penalties, assessments, permit conditions, litigation cost, attorneys’ fees, administrative requirements, in-kind contributions, adaptive management requirements, and cost-sharing requirements. The Salton Sea Restoration Limit is exclusive of Salton Sea restoration funding provided pursuant to the provisions of subdivision (c) of Section 2081.7 and subdivision (f) of Section 1013 of the Water Code.

e. “State” shall mean the State of California.

1.2 Present Value of Amounts.

The amounts stated in subdivisions b and c of Section 1.2 and in Articles IX and XIV are in 2003 dollars and are expressed as present-value totals. The present value of these amounts shall be calculated using a six percent discount factor.

ARTICLE II

CREATION OF THE QUANTIFICATION SETTLEMENT AGREEMENT
JOINT POWERS AUTHORITY

2.1. Creation of Agency.

There is hereby created a public agency known as the "Quantification Settlement Agreement Joint Powers Authority" (the "Authority"). The Authority is formed by this Agreement pursuant to the provisions of the Joint Exercise of Powers Act, being Article I, Chapter 5, Division 7, Title 1 of the Government Code of the State of California commencing at Section 6500, as supplemented by 2003 Stats., ch. 613 (SB 654 Machado). The Authority is a public agency separate from the Parties.

2.2. Purpose of Authority.

The purpose of this Authority is to pay for Environmental Mitigation Requirements and Environmental Mitigation Costs by and through the collection, holding, investing and disbursing of funds.

ARTICLE III

POWERS OF THE AUTHORITY

3.1 General Powers.

The governing body of the Authority shall have the power, in the Authority's own name, and as necessary or convenient to implementation of the Authority's purpose, to do any and all of the following:

(a) To make and enter into contracts, including, without limitation contracts with one or more of the Parties.

(b) To employ agents, employees, attorneys, consultants, advisors, and independent contractors.

(c) To incur debt, liabilities or obligations provided, however, that no debt, liability or obligation shall directly or indirectly result in a liability of the CVWD, the IID or the SDCWA in excess of the Environmental Mitigation Requirement Cost Limitation or the Salton Sea Restoration Limit. The Authority may issue revenue bonds, contracts of indebtedness,

certificates of participation and other finance instruments pursuant to any State statute applicable to any of the Parties. Action under this subdivision requires the affirmative vote of three Commissioners, including the Commissioner representing the State.

(d) To disburse funds to one or more of the Parties to pay for the implementation of the Environmental Mitigation Requirements, in accordance with a budget adopted by the governing body.

(e) To sue and be sued in its own name.

(f) To accumulate reserve funds for the purposes herein.

(g) To apply for, receive and utilize gifts, grants, and loans from any source available.

(h) To acquire, by grant, lease, purchase, bequest, devise, and hold, enjoy, lease or sell, or otherwise dispose of real and personal property.

(i) To invest surplus funds pursuant to Government Code § 6509.2, subject to Government Code §§ 53600 *et seq.* Interest or other earnings on funds contributed for Environmental Mitigation Costs shall be used exclusively for the payment of such costs.

(j) To adopt rules, policies, by-laws, regulations and procedures governing the operation of the Authority consistent with this Agreement.

(k) To take other actions necessary or convenient for the full exercise of the powers granted by this Agreement.

3.2 Limitation on Powers.

The Environmental Mitigation Cost Limitation and the Salton Sea Restoration Limit have been established pursuant to subparagraph (1) of subdivision (b) and subdivision (c) of Section 3 of SB 654. The Authority shall have no power to incur any debt, liability or obligation that would directly or indirectly result in any liability to the CVWD, the IID or the SDCWA in excess of the Environmental Mitigation Cost Limitation or the Salton Sea Restoration Limit. The liability for any Environmental Mitigation Requirements in excess of the Environmental Mitigation Cost Limitation or any funding obligation or in-kind contributions of any kind for restoration of the Salton Sea, including federal cost-sharing or other federal requirements, shall be borne exclusively by the State and sources other than the CVWD, the IID or the SDCWA, except for restoration funding provided pursuant to the requirements of subdivision (c) of Section 2081.7 and subdivision (f) of Section 1013 of the Water Code.

3.3 Limitation of Liability of Parties.

The debts, liabilities and obligations of the Authority shall be the debts, liabilities and obligations of the Authority alone and not of the Parties or any Party.

3.4 Contracts.

The procedures and requirements applicable to contracts of the SDCWA shall apply to contracts of the Authority, provided, however, that all contracts shall be approved by the Commission.

3.5 Exercise of Powers.

The Authority shall be subject to the same restrictions upon the manner of exercising its powers as the restrictions upon the manner of exercising the powers of the SDCWA, unless otherwise provided herein.

ARTICLE IV

TERM

4.1 Effective Date.

This Agreement shall become effective and the Authority shall be created at the latter of the following events: (a) when the governing bodies of all of the Parties to this Agreement have authorized execution of this Agreement; or (b) January 1, 2004.

4.2 Termination Date.

This Agreement shall terminate on the later of (1) the mutual Termination Date of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, or (2) when all Environmental Mitigation Requirements have been satisfied and the costs thereof fully paid, unless terminated sooner by written consent of each of the Parties evidenced by a certified copy of a resolution of its respective governing bodies.

4.3 Limitation on Withdrawal.

No Party to this Agreement may withdraw from the Authority without the express written consent or approval of all of the remaining Parties. Any attempted withdrawal by a Party not made in accordance with this Agreement shall be deemed a breach of this Agreement and the breaching Party shall be liable to the non-breaching Parties for the remainder of any sums owed by the Party under the ESCA and this Agreement, the Party's allocation of administrative expenses for the fiscal year in which the breach occurred and for the following fiscal years and for any damages for such breach.

ARTICLE V
GOVERNING BOARD

5.1 The Commission.

The governing body of the Authority shall be known as the "Commission" for the Authority. The Commission shall be composed of four (4) members ("Commissioners"), one from each Party to this Agreement. All of the power and authority of the Authority shall be exercised by the Commission.

5.2 Appointments to the Commission.

The CVWD, the IID and the SDCWA shall each designate and appoint one (1) member of its governing board to act as its Commissioner and one (1) member of its governing body to act as its alternate Commissioner. In lieu of appointing a member of its governing body, the CVWD, the IID or the SDCWA may appoint its general manager or a member of its staff as a Commissioner or alternate Commissioner. The manner of appointment of the Commissioner and alternate Commissioner shall be determined by the appointing agency, subject to the consent of the agency's governing body. The Director of the Department of Fish and Game or his or her designee shall be the Commissioner representing the State. The Director of the Department shall also designate an alternate. During any absence of the Commissioner, the alternative Commissioner shall act in his place. Each Commissioner (and alternate), other than the Commissioner representing the Department shall serve at the pleasure of the governing body of the appointing Party and may be removed at any time, with or without cause, in the sole discretion of the Party's governing body.

5.3 Commissioners to Serve Without Compensation from Authority.

The Commissioners and alternate Commissioners shall serve without compensation from the Authority. Each Party shall be responsible for paying the expenses of the Commissioner and alternate Commissioner of the Party incurred in connection with Authority business according to the law and policies applicable to the Party.

5.4 Resignation of Commissioners.

Any Commissioner or alternate Commissioner may resign at any time by giving notice to the Chairperson of the Authority and the presiding officer of the Party. Any such resignation shall be effective upon receipt of such notice or at any later time specified in the notice.

5.5 Vote by Commissioners.

Unless otherwise disqualified pursuant to California law because of a personal financial or other conflict of interest, a Commissioner, or an alternate Commissioner when acting in the absence of the Commissioner, may vote on all matters of Authority business, including, without limitation, contracts between the Authority and the appointing Party.

5.6 Local Conflict of Interest Code.

The Commission shall adopt a local conflict of interest code pursuant to the provisions of the Political Reform Act.

ARTICLE VI
CONDUCT OF MEETINGS

6.1 Meetings.

The Commission of the Authority shall establish a regular meeting schedule. At its first meeting, the Commission shall provide for the time and place of holding its regular meetings. Special meetings may be called at the request of the Chairperson or of a majority of the Commissioners. Notice of and the agenda for all meetings shall be furnished in writing to each Commissioner (and alternate) and to each Party to this Agreement. The meetings of the Commission shall be noticed, held and conducted in accordance with the provisions of the Ralph M. Brown Act as set forth in the California Government Code. The Commission may adopt supplemental rules of procedure for the conduct of meetings.

6.2 Minutes.

The Secretary of the Authority shall cause to be kept the minutes of all Commission meetings, and shall cause a copy of these minutes, along with copies of all ordinances and resolutions enacted, to be forwarded to each of the Parties hereto.

6.3 Quorum.

Three members of the Commission shall constitute a quorum for the transaction of business. In the absence of a Commissioner, the alternate Commissioner, if present, shall be counted for purposes of determining a quorum.

6.4 Actions.

Unless otherwise provided herein, all actions of the Commission shall be passed upon the affirmative vote of three Commissioners. Actions may be taken by resolution or motion recorded in the minutes.

ARTICLE VII

OFFICERS

7.1 Chairperson.

The Commissioner representing the State shall act as Chairperson of the Commission. The Chairperson is the presiding officer of the Commission. The Chairperson and shall be recognized as the head of the Authority for all ceremonial and public purposes, and for the signing of legal instruments and documents of the Authority. At meetings of the Commission, the Chairperson shall not be deprived of any of the rights and privileges of a Commissioner by reason of being presiding officer. The alternate Commissioner representing the State shall serve as Chairperson in the absence of the State's Commissioner.

7.2 Vice-chairperson.

The Commission may select one of its members to serve as Vice-chairperson. The Vice-chairperson is the presiding officer of the Commission in the absence of the Chairperson. The Vice-chairperson shall perform the duties of the Chairperson whenever the Chairperson is absent, temporarily incapacitated from performing the duties of the Chairperson, or as may be delegated by the Chairperson. The Vice-chairperson shall serve at the pleasure of the Commission.

7.3 Additional Officers.

The Commission may appoint such additional officers to perform such duties and shall have such powers as the Commission may, from time to time, determine.

7.4 Service of Vice-chairperson or Additional Officers.

Subject to the provisions set forth herein, the officers shall be appointed annually in January. Officers shall assume the duties of their offices immediately after their appointment and shall hold office until their successors are appointed, except in the case of their earlier removal or resignation. Vacancies shall be filled by appointment of the Commissioners and such appointee shall hold office until the appointment of his or her successor.

ARTICLE VIII

MANAGEMENT

8.1 Chief Administrative Officer.

The General Manager of the SDCWA or an employee of the SDCWA designated by the General Manager of the SDCWA shall serve as the Chief Administrative Officer of the Authority. Such service shall be without compensation by the Authority. The Chief Administrative Officer is responsible for the efficient administration of the affairs of the Authority. The Chief Administrative Officer shall serve as secretary to the Commission and

shall keep the minutes and records of the Authority. The records of the Authority are subject to the California Public Records Act. The SDCWA shall not receive economic remuneration from the Authority or the other Parties for provision of administrative management services under this paragraph.

8.2 Treasurer.

The Treasurer of the SDCWA shall serve as the treasurer of the Authority. The treasurer shall be the depository and have custody of all of the money of the Authority from whatever source. The duties of the treasurer shall be performed in accordance with Government Code § 6505.5 without compensation or charge to the Authority, provided, however, that the treasurer may contract with a certified public accountant, public accountant or other qualified independent auditor to make an annual audit of the accounts and records of the Authority as provided in Government Code § 6505 and may charge the costs thereof to the Authority as a reimbursable expense. The treasurer may contract with qualified investment, financial and other advisors and may charge the costs thereof to the Authority as a reimbursable expense. Except as otherwise provided herein, the SDCWA shall not receive economic remuneration from the Authority or the other Parties for provision of treasurer services under this paragraph. The Treasurer may invest funds of the Authority according to an investment policy of the Commission adopted pursuant to Government Code §§ 53600 *et seq.* Until such an investment policy is adopted, the investment policy of the SDCWA shall apply to investment of Authority funds.

8.3 Legal Counsel.

The chief legal counsel of CVWD shall serve as legal counsel to the Authority. In the event of an ethical conflict of interest arising from a direct dispute between the Authority and any of the Parties, the Authority shall retain independent legal counsel the cost of which shall be borne by the Parties. The CVWD shall not receive economic remuneration from the Authority or the other Parties for provision of legal services under this paragraph. Litigation services, if needed, are to be provided subject to a contract with qualified counsel after approval by the Commission, and shall be paid pursuant to Section 10.4.

8.4 Agent for Service of Process.

The Chief Administrative Officer of the Authority is the Authority's agent for service of process.

8.5 Authority's Business Offices.

Authority's business office shall be located at the principal place of business of the SDCWA, which on the date of this agreement is 4677 Overland Ave., San Diego, CA 92123. SDCWA shall make its personnel available, during the term of this Agreement as necessary to perform the secretarial, clerical, accounting and administrative duties of the Authority without remuneration, cost or expense of any kind to the Authority or the other Parties, except as otherwise provided in Article X.

8.6 Roster of Public Agencies.

The Chief Administrative Officer shall register the Authority in the roster of public agencies pursuant to Government Code § 53051.

ARTICLE IX

CONTRIBUTIONS FOR ENVIRONMENTAL
MITIGATION REQUIREMENTS

9.1 Environmental Mitigation Contributions.

The CVWD, the IID and the SDCWA shall make contributions to the Authority having a present value of the following amounts:

CVWD	\$36,717,791
IID	\$30,000,000
SDCWA	\$52,220,859

The IID shall also make an additional contribution pursuant its obligation under Section 4.1(2) of the ECSA having a present value of \$14,061,350. Payments shall be made according to the schedules attached as Exhibits C-1, C-2 and C-3, unless paid in advance.

9.2 State Obligation.

The State is solely responsible for the payment of the costs of and liability for Environmental Mitigation Requirements in excess of the Environmental Mitigation Cost Limitation. The amount of such costs and liabilities shall be determined by the affirmative vote of three Commissioners, including the Commissioner representing the State, which determination shall be reasonably made. The State obligation is an unconditional contractual obligation of the State of California, and such obligation is not conditioned upon an appropriation by the Legislature, nor shall the event of non-appropriation be a defense.

9.3 Remaining Environmental Mitigation Costs.

The State shall have the rights under Section 4.2(2) of the ECSA to reduce its possible obligation to pay Remaining Environmental Mitigation Costs.

9.4 Environmental Mitigation Costs Following Termination of 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement.

The Authority shall have the rights and obligation under Section 4.3(3) and (4) of the ECSA.

9.5 Adjustment of Payment Schedules.

The CVWD, the IID or the SDCWA may adjust its respective payment schedule identified in Exhibit C-1, C-2 or C-3 so long as the adjustment does not affect the Authority's ability to pay Environmental Mitigation Costs subject to Environmental Mitigation Cost Limitation. If the Authority issues debt, the Party or Parties whose schedule of payments provides the revenue to repay the debt shall (i) reimburse the Authority for the amount, if any, debt service payments exceed the amount required if the Authority borrowed money at an annual interest rate of 6% compounded annually, and (ii) shall receive a credit against its schedule of payments for the amount, if any, debt service payments are less than they would be if the Authority had borrowed money at an annual rate of 6% compounded annually. Payments actually made by a Party toward Environmental Mitigation Costs after October 10, 2003 and before the Effective Date of this Agreement shall be credited to that Party's payment obligation under this Agreement. Additionally, SDCWA shall receive a credit toward its payment obligations under this Agreement, not to exceed a present value of \$3,118,000, for payments made to the Bureau of Reclamation for satisfaction of Environmental Mitigation Requirements pursuant to that agreement among the Bureau of Reclamation, MWD, and SDCWA, dated October 10, 2003, regarding responsibility for implementation of Conservation and Mitigation Measures for the Colorado River described in a U.S. Fish and Wildlife Service Biological Opinion dated January 12, 2001.

ARTICLE X

BUDGET, CONTRIBUTION FOR THE COST AND EXPENSES OF THE AUTHORITY AND PAYMENTS BY THE AUTHORITY

10.1 Annual Budget.

As soon as possible after the formation of the Authority and annually thereafter, the Commission shall adopt a budget for the payment of Environmental Mitigation Costs. The budget shall be prepared in sufficient detail to constitute an operating outline for contributions to be made by the Parties and expenditures to be made during the ensuing year to pay for the Environmental Mitigation Costs. The budget shall include payments to IID for Salton Sea mitigation water consistent with Exhibit D. The affirmative vote of three Commissioners, including the Commissioner representing the State, is required for action under this section, and the approval of each shall not be unreasonably withheld after giving meaningful consideration to the need for timely implementation of any Environmental Mitigation Requirement and the appropriate procurement or maintenance of any permit, approval, authorization, or other requirement, of any Environmental Mitigation Requirement.

10.2 Financing Plan.

The Commission may adopt a long-term financing plan to assure that sufficient funds are available to meet the reasonably expected annual costs of paying for the Environmental Mitigation Requirements. In the event that the Authority is required to issue debt, in any form, the Party or Parties whose schedule of payments provides the revenue to repay the debt shall incur the costs of issuance and the adjustments as provided for in Section 9.3. The affirmative

vote of three Commissioners, including the Commissioner representing the State, is required for action under this section.

10.3 Reimbursement to Parties of Direct Costs Incurred for Environmental Mitigation.

A Party that incurs Direct costs for Environmental Mitigation Costs under the approved budget will be reimbursed by the Authority. Reimbursement shall be made only upon submission of a cost report signed by the treasurer or controller of the Party and determination of the Authority that the report substantially conforms to the requirements of this Section. The cost report shall be in a form and contain the information specified by the Commission. The cost report shall be based upon proper accounting records maintained by the Party. The accounting records shall be open to inspection by the Authority or any other Party. The Authority's determination regarding a cost report shall be made within thirty days of submission. Reimbursement shall be made by the Authority within thirty days following determination of the Authority that the report conforms with the requirements of this section. If the Authority determines that a report does not comply with the requirements of this section, the Party submitting the report may submit a revised report, which shall then be considered in the same manner as an initial report. If any portion of an approved reimbursement is not timely paid, the delinquent amount will bear interest at the rate earned by the Authority on its investments, but not to exceed twelve percent interest per annum compounded monthly. Direct costs shall mean Costs, other than out-of-pocket costs, as defined in the ESCA, but shall not include a Party's administrative costs, overhead costs, staff costs, losses of revenue from any source, other opportunity costs of any kind and other similar indirect costs as determined by the Commission not inconsistent with the ESCA.

10.4 Environmental Litigation Costs.

Environmental Litigation Costs shall be paid as set forth in Section 3.2 of the ECSA.

ARTICLE XI

CONTRIBUTION PROCEDURE FOR AMOUNTS EXTRAORDINARY ADMINISTRATIVE AND OTHER REIMBURSABLE EXPENSES

11.1 Extraordinary Administrative and Other Reimbursable Expenses.

The Commission may, upon request by the SDCWA reimburse the SDCWA for extraordinary administrative costs and other reimbursable expenses incurred on behalf of and at the specific request of the Authority. The Commission shall pay for legal, accounting, and other special professional services employed by the Authority and not otherwise provided by a Party. Upon authorization of such expenses by the Commission, each Party shall provide for equal contributions toward the total amount of the approved expenditure. Contributions for extraordinary administrative costs shall be in addition to the contributions for the payment of Environmental Mitigation Requirements and shall not count towards the Environmental Mitigation Cost Limitation.

11.2 Time of Payment.

The contribution of each Party for allowed costs under Section 11.1 shall be billed quarterly and due and payable thirty (30) days after receipt of a billing therefor from the Authority. Unpaid contributions shall bear interest at the legal rate of interest from the date due to the date paid.

ARTICLE XI

ACCOUNTING

12.1 Fiscal Year.

The fiscal year of the Authority shall be from July 1 of a year to June 30 of the following year.

12.2 Books and Accounts.

Full books and accounts shall be maintained by the treasurer in accordance with practices established by or consistent with those utilized by the Controller of the State of California for like public agencies. Subject to the provisions of paragraph 8.2, the treasurer of the Authority shall comply strictly with the requirements of the statutes governing joint power agencies, Chapter 5, Division 7, Title 1 of the Government Code, commencing with Section 6500.

12.3 Filing Annual Audit.

The annual audit of the accounts of the Authority shall be filed with each Party no later than fifteen (15) days after receipt of the audit by the Commission.

ARTICLE XIII

DISSOLUTION OR TERMINATION

13.1 Distribution of Residual.

Dissolution or termination shall not relieve any Party of its obligation to pay for Environmental Mitigation Requirements under this Agreement. Upon dissolution or termination of the Authority any residual funds remaining after payment in full of all Environmental Mitigation Requirements shall be distributed to the Salton Sea Restoration Fund, and any remaining funds due from a Party shall be paid by that party directly to the Salton Sea Restoration Fund.

13.2 Manner of Distribution.

The distribution of assets may be made in kind or assets may be sold and the proceeds thereof distributed to a Party at the time of withdrawal or to the Parties at the time of dissolution.

ARTICLE XIV

FUNDING LIMITATION

14.1 Funding Limitation for Environmental Mitigation Requirements.

The liability of the CVWD, the IID and the SDCWA for Environmental Mitigation Requirements or Environmental Mitigation Costs shall not exceed the Environmental Mitigation Cost Limitation. The State shall defend, indemnify and hold harmless the CVWD, the IID and the SDCWA, individually or collectively as the case may be, with respect to any Environmental Mitigation Requirement or Environmental Mitigation Cost which exceeds the Environmental Mitigation Cost Limitation.

14.2 Cooperation Regarding State Obligation.

If the Authority anticipates that the Environmental Mitigation Cost Limitation will be exceeded within two years, then the Authority shall submit a written notice to the State stating the reasons for that anticipation, as well as estimates of the projected cost of remaining Environmental Mitigation Requirements. The State will seek, with the support of the other Parties, to obtain Legislative appropriation of funds sufficient to satisfy the State obligation, if any, for costs of the Environmental Mitigation Requirements as soon as it appears that the expenditures of the Authority are within \$5,000,000 of the Environmental Mitigation Requirement Cost Limitation, so long as the Authority has encumbered the total amount owed pursuant to Article IX by the CVWD, the IID and the SDCWA.

14.3 Funding Limitation for Salton Sea Restoration Costs.

In accordance with this Agreement and as required by the State agency responsible for administration of the Salton Sea Restoration Fund, the CVWD, the IID and the SDCWA shall make contributions to the Salton Sea Restoration Fund having a present value of the following amounts:

CVWD	\$ 8,282,209
IID	\$ 9,938,650
SDCWA	\$11,779,141

IID's payments to the Salton Sea Restoration Fund shall not exceed in any year the amounts set forth on Exhibit E., unless IID consents.

The liability of the CVWD, the IID and the SDCWA for Salton Sea restoration costs shall not exceed the Salton Sea Restoration Limit. The State shall defend, indemnify and hold harmless the CVWD, the IID and the SDCWA, individually or collectively as the case may be,

with respect to any liability, requirement, expense, cost or obligation for restoration of the Salton Sea the cost of which exceeds the Salton Sea Restoration Limit.

ARTICLE XV

GENERAL PROVISIONS

15.1 Governing Law.

This Agreement is entered into in the Counties of Riverside, Imperial and San Diego, California and shall be governed by and construed in accordance with the laws of the State of California.

15.2 Severability and Waiver.

In the event that any term or condition of this Agreement is determined to be invalid, illegal or otherwise unenforceable, this Agreement shall be terminated unless the Parties otherwise consent to continuation of the Agreement without the severed provision. If the CVWD, the IID, or the SDCWA have made payments or incurred unreimbursed Direct costs for the Environmental Mitigation Requirements or for the Salton Sea Restoration Fund as provided in this Agreement, then the obligations of the State under Sections 9.2, 14.1 or 14.3 shall remain in full force and effect as to the party making such contribution notwithstanding the severance of any provision, or termination of this Agreement pursuant to this Section. Lack of enforcement of any term or condition of this Agreement shall not be construed as a waiver of any rights conferred by such term or condition. Unless otherwise agreed to in writing, the failure of any Party to require the performance by the other Party of any provision hereof shall in no way affect the full right to require such performance at any time thereafter, nor shall the waiver of any provision hereof on one occasion be taken or held to be a waiver of the provision itself.

15.3 Binding Effect.

This Agreement shall be binding on the Parties and their respective successors and assigns, provided that assignment of this Agreement shall require consent of the other Parties.

15.4 Authority to Execute.

Any person signing this Agreement represents that he/she has full power and authority to do so, and, that his/her signature is legally sufficient to bind the Party on whose behalf he/she is signing.

15.5 Integrated Agreement.

This Agreement contains the entire understanding of the Parties with respect to the subject matter hereof, and supersedes any prior understanding between the Parties, except as set forth herein, whether written or oral. This Agreement can be amended only in writing signed by the Parties.

15.6 Time of the Essence.

Time is of the essence of this Agreement.

15.7 Notices.

Any communication, notice or demand of any kind whatsoever which any Party may be required or may desire to give to or serve upon the other Party shall be in writing and delivered by personal service (including express or courier service), by electronic communication, whether by telex, telegram or telecopying (if confirmed in writing sent by registered or certified mail, postage prepaid, return receipt requested), or by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

State of California c/o Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

CVWD: Coachella Valley Water District
Attention: General Manager/Chief Engineer
P. O. Box 1058
Coachella, CA 92236

for personal or overnight delivery:

Coachella Valley Water District
Attention: General Manager/Chief Engineer
Avenue 52 and Highway 111
Coachella, CA 92236

Telephone: 760-398-2651
Facsimile: 760-398-3711

Copy to: Gerald D. Shoaf, Esq.
Steven B. Abbott, Esq.
Redwine and Sherrill
1950 Market Street
Riverside, CA 92501-1720
Telephone: 909-684-2520
Facsimile: 909-684-9583

IID: Imperial Irrigation District
Attn: General Manager
P.O. Box 937
Imperial, CA 92251
Telephone: 760-339-9477
Facsimile: 760-3339-9392

for personal or overnight delivery:

Imperial Irrigation District
Attn: General Manager
333 E. Barioni Boulevard
Imperial, CA 92251

Copy to: John P. Carter
Horton, Knox, Carter & Foote
895 Broadway
El Centro, CA 92243
Telephone: 760-482-9651
Facsimile: 760-370-0900

SDCWA: San Diego County Water Authority
Attn: General Manager
4677 Overland Ave.
San Diego, CA 92123
Telephone: 858-522-6780
Facsimile: 858-522-6562

Copy to: San Diego County Water Authority
Attn: General Counsel
4677 Overland Ave.
San Diego, CA 92123
Telephone: 858-522-6790
Facsimile: 858-522-6562

Any Party may change its address for notice by written notice given to the other Parties in the manner provided in this subsection 15.7. Any such communication, notice or demand shall be deemed to have been duly given or served on the date personally served, if by personal service; one (1) day after the date of confirmed dispatch, if by electronic communication, or three (3) days after being placed in the U.S. mail, if mailed.

15.8 Further Acts.

Each Party agrees to perform any further acts and to execute and deliver any documents that may be reasonably necessary to carry out the provisions of this Agreement.

15.9 Interpretation.

The provisions of this Agreement shall be construed as to their fair meaning, and not for or against any Party based upon any attribution to such Party as the source of the language in question.

15.10 Counterparts.

This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon, provided such signature page is attached to another counterpart identical thereto, except for having additional signature pages executed by another Party to this Agreement attached thereto.

15.11 Third Party Beneficiaries

This Agreement, other than with respect to Section 9.2, is made solely for the benefit of the Parties hereto and their respective successors and assigns. No other person or entity may have or acquire any right by virtue of this Agreement.

15.12 Additional Parties.

Additional parties may join this agreement only upon the amendment of this agreement consented to by all the existing Parties.

15.13 Remedies.

Each Party shall have all remedies available at law or in equity to enforce the terms of this Agreement. The State shall have the power to sue and be sued in any court of competent jurisdiction.

15.14 Joint Defense.

The Parties and the Authority will cooperate, proceed with reasonable diligence, and use reasonable best efforts to defend any lawsuit or administrative proceeding challenging the validity or enforceability of any terms of this Agreement, or any Party's right to act in accordance with any of the terms of this Agreement. Each Party will bear its own costs of participating and representation in any such defense.

15.15 No Waiver of Sovereign Immunity.

Notwithstanding any other provision of this Agreement, nothing herein is intended to constitute consent by the State of California or any of its departments, agencies, commissions, or boards to suit in any court described in Article III of the U.S. Constitution. This Agreement shall not waive, or be interpreted as waiving, the State of California's sovereign immunity under the

Eleventh Amendment or any other provision of the U.S. Constitution in any present or future judicial or administrative proceeding.

IN WITNESS WHEREOF the Parties hereto have executed this Agreement on the day and year hereinafter indicated.

STATE OF CALIFORNIA, acting by and through the Department of Fish and Game

By Robert C. Noynt
Title _____

Attest:

By _____

Approved as to Form and Content:

By _____

COACHELLA VALLEY WATER DISTRICT, a California county water district

By Steven Robbins
| Steven Robbins
Its General Manager/Chief Engineer

Approved as to Form and Content:

REDWINE AND SHERRILL

By Glenn Hertz

IMPERIAL IRRIGATION DISTRICT, a California irrigation district

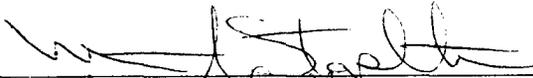
By John W. Deen
Its **PRESIDENT**

By Gloria A. Rivera
Its Secretary

Approved as to Form and Content:

By Michael Coates

SAN DIEGO COUNTY WATER
AUTHORITY

By 
Its General Manager

By _____
Its _____

Approved as to Form and Content:

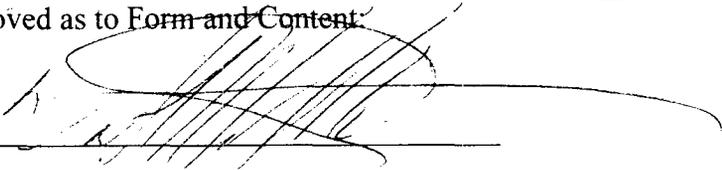
By 

EXHIBIT A
SB 654 (MACHADO)

Senate Bill No. 654

CHAPTER 613

An act to amend Section 12562 of the Water Code, and to amend Section 1 of Chapter 617 of the Statutes of 2002, relating to water, and making an appropriation therefor.

[Approved by Governor September 29, 2003. Filed with Secretary of State September 29, 2003.]

LEGISLATIVE COUNSEL'S DIGEST

SB 654, Machado. Water: Salton Sea: Colorado River.

(1) Existing law appropriates General Fund moneys to, among other things, line portions of the All American Canal and the Coachella Branch of the All American Canal. Existing law requires the lining projects to be completed not later than December 31, 2006, or such later date as may be required by extraordinary circumstances.

This bill would make legislative findings as to the extraordinary circumstances that prevent the lining projects from being completed by December 31, 2006, and would extend the date to December 31, 2008.

(2) Existing law makes legislative findings concerning the Salton Sea and a Quantification Settlement Agreement, including a finding that species previously designated as fully protected may be taken during activities intended to meet the state's commitment to reduce its use of Colorado River water, as long as those activities are found to comply with existing law.

This bill would, instead, make findings permitting the taking incidental to those activities.

(3) Existing law provides for a California's Colorado River Water Use Plan, and for a Quantification Settlement Agreement.

This bill would make a legislative finding and declaration that in order to resolve conflicts that have prevented the implementation of California's Colorado River Water Use Plan it is necessary to provide a mechanism to implement and allocate environmental mitigation responsibility between water agencies and the state for the implementation of the Quantification Settlement Agreement. The bill would permit the Department of Fish and Game to enter into a joint powers agreement for the purpose of providing for the payment of costs for environmental mitigation requirements, and would specify the costs to be paid by the agencies that are parties to the agreement. By authorizing the department to enter into the agreement, this bill would

make an appropriation by authorizing expenditures from the continuously appropriated Fish and Game Preservation Fund.

(4) This bill would become operative only if SB 277 and SB 317 are both chaptered and become effective on or before January 1, 2004.

Appropriation: yes.

The people of the State of California do enact as follows:

SECTION 1. Section 12562 of the Water Code is amended to read:

12562. (a) (1) In furtherance of implementing and achieving the goals of the "California Plan," the sum of two hundred million dollars (\$200,000,000) in the account shall be used by the director to finance and arrange for lining portions of the All American Canal and the Coachella Branch of the All American Canal.

(2) The canal lining projects shall be completed not later than December 31, 2008, or such later date as may be required by extraordinary circumstances.

(3) The allocation of the water conserved from the canal lining projects and to be made available to the Metropolitan Water District of Southern California shall be consistent with federal law and shall be determined by an agreement among the Metropolitan Water District of Southern California, the Imperial Irrigation District, the Palo Verde Irrigation District, the Coachella Valley Water District, and the San Luis Rey settlement parties, reached after consultation with the director and the United States Secretary of the Interior.

(b) (1) The sum of thirty-five million dollars (\$35,000,000) from the account shall be used by the director to finance the installation of recharge, extraction, and distribution facilities for groundwater conjunctive use programs necessary to implement the "California Plan."

(2) Water stored in connection with the groundwater conjunctive use programs described in paragraph (1) shall be for the benefit of the member public agencies of the Metropolitan Water District of Southern California.

(3) Nothing in this subdivision limits the ability of the Metropolitan Water District of Southern California to enter into agreements regarding the sharing of any water made available under this subdivision.

(c) The Legislature finds that the extension of the date from December 31, 2006, to December 31, 2008, for completing the canal project linings under paragraph (2) of subdivision (a) during the 2003 portion of the 2003–04 Regular Session is required due to extraordinary circumstances. The Legislature finds that there have been unforeseen construction delays, contract award delays, and changed conditions

requiring design modifications for lining the All American Canal and the Coachella Branch of the All American Canal, and that these circumstances are extraordinary.

SEC. 2. Section 1 of Chapter 617 of the Statutes of 2002 is amended to read:

Section 1. (a) "Quantification Settlement Agreement" means the agreement, the provisions of which are substantially described in the draft Quantification Settlement Agreement (QSA), dated December 12, 2000, and submitted for public review by the Quantification Settlement Agreement parties, and as it may be amended, and that shall include as a necessary component the implementation of the Agreement for Transfer of Conserved Water by and between the Imperial Irrigation District and the San Diego County Water Authority, dated April 29, 1998 (IID/SDCWA Transfer Agreement), and as it may be amended, and any QSA-related program that delivers water at the intake of the Metropolitan Water District of Southern California's Colorado River Aqueduct.

(b) It is the intent of the Legislature to allocate fifty million dollars (\$50,000,000) from funds available pursuant to the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, if it is approved by the voters at the statewide general election to be held November 5, 2002 (Proposition 50), as a minimum state contribution or matching contribution for federal funds or funds obtained from other sources to prepare the restoration study, to assist in the implementation of the preferred alternative or other related restoration activities, including the program referred to in paragraph (3) of subdivision (d) of Section 2081.7 of the Fish and Game Code, at the Salton Sea or the lower Colorado River, or to assist in the development of a natural community conservation plan that is consistent with the initiative and that is implemented to effectuate the QSA.

(c) The Legislature finds that it is important to the state to meet its commitment to reduce its use of water from the Colorado River to 4.4 million acre-feet per year. The Legislature further finds that it is important that actions taken to reduce California's Colorado River water use are consistent with its commitment to restore the Salton Sea, which is an important resource for the state. The Legislature further finds that species previously designated as fully protected may be taken incidental to activities intended to meet the state's commitment to reduce its use of Colorado River water as long as those activities are found to comply with existing law, including Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code.

(d) California's Colorado River Water Use Plan is a framework developed to allow California to meet its Colorado River needs from

within its basic annual apportionment. California will be required to reduce the amount of Colorado River water it uses by up to 800,000 acre-feet per year.

(e) California's basic apportionment of Colorado River water is 4.4 million acre-feet per year, but until recently, due to the availability of surplus river water and apportioned but unused water of Nevada and Arizona, California has used up to 5.2 million acre-feet per year over the past ten years. About 700,000 acre-feet of this additional water has been used to fill the Colorado River Aqueduct, which transports water to the southern California urban coast. Nevada and Arizona are now using, or are close to using, their full apportionments, and California can no longer rely on that surplus of water.

(f) The Salton Sea will eventually become too saline to support its fishery and fish-eating birds unless a restoration plan is adopted and implemented. The transfer of water from the Imperial Irrigation District to the San Diego County Water Authority and the other Quantification Settlement Agreement (QSA) parties pursuant to the QSA could result in an acceleration of the rate of salinization of the Salton Sea.

(g) Restoration of the Salton Sea is in the state and national interest. Congress recognized in the Salton Sea Reclamation Act of 1998, Public Law 105-372, that appropriate federal agencies should offer alternative restoration options to Congress and the public in order to avoid further deterioration of the internationally significant habitat and wildlife values of the Salton Sea and to protect the wide array of economic and social values that exist in the immediate vicinity of the Salton Sea. The failure to issue that report in a timely fashion has unnecessarily constrained the Legislature's ability to consider fully the costs and benefits of various options to restoration that should be undertaken at the Salton Sea.

SEC. 3. The Legislature hereby finds and declares that in order to resolve conflicts that have prevented the implementation of California's Colorado River Water Use Plan it is necessary to provide a mechanism to implement and allocate environmental mitigation responsibility between water agencies and the state for the implementation of the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, as follows:

(a) Notwithstanding any other provision of law, the Department of Fish and Game may enter into a joint powers agreement for the purpose of providing for the payment of costs for environmental mitigation requirements. The Director of the Department of Fish and Game or his or her designee shall chair the authority created by the joint powers agreement. The joint powers agreement shall include the following agencies:

- (1) Coachella Valley Water District.

(2) Imperial Irrigation District.

(3) San Diego County Water Authority.

(b) Costs for environmental mitigation requirements shall be allocated based on an agreement among Imperial Irrigation District, the Coachella Valley Water District, the San Diego County Water Authority and the Department of Fish and Game and shall include the following:

(1) Costs up to, and not to exceed, one hundred thirty-three million dollars (\$133,000,000) shall be paid by the Imperial Irrigation District, the Coachella Valley Water District, and the San Diego County Water Authority for environmental mitigation requirements. Those costs may be paid to a joint powers authority established pursuant to this section. The amount of the obligation established in this paragraph shall be adjusted for inflation.

(2) Thirty million dollars (\$30,000,000) shall be paid by the Imperial Irrigation District, Coachella Valley Water District, and the San Diego County Water Authority to the Salton Sea Restoration Fund as provided in paragraph (6) of subdivision (c) of Section 2081.7 of the Fish and Game Code. This amount shall be adjusted for inflation.

(c) Except for the requirements of subdivision (c) of Section 2081.7 of the Fish and Game Code, subdivision (f) of Section 1013 of the Water Code, and the provisions of subdivision (b), no further funding obligations or in-kind contributions of any kind for restoration of the Salton Sea shall be required of the Imperial Irrigation District, the Coachella Valley Water District, the Metropolitan Water District of Southern California, and the San Diego County Water Authority, including federal cost-sharing or other federal requirements. Any future state actions to restore the Salton Sea will be the sole responsibility of the State of California.

(d) As used in this section, “environmental mitigation requirements” means any measures required as a result of any environmental review process for activities which are part of the project described in the final Environmental Impact Report/Environmental Impact Statement for the Imperial Irrigation District Water Conservation and transfer project certified by the Imperial Irrigation District on June 28, 2002, as modified and supplemented by the addendum thereto prepared to assess subsequent revisions to the Quantification Settlement Agreement, but excluding measures required to address environmental impacts:

(1) Within the service areas of the Coachella Valley Water District, other than impacts related to the Salton Sea, the San Diego County Water Authority, and the Metropolitan Water District of Southern California.

(2) Associated with the All American Canal and the Coachella Canal Lining Projects, and measures to address socioeconomic impacts.



(e) As used in this section, “environmental review process” means any of the following:

(1) The conducting of any required environmental review or assessment, or both.

(2) The obtaining of any permit, authorization, opinion, assessment or agreement.

(3) The study or design of any required mitigation pursuant to the California Environmental Quality Act, the National Environmental Protection Act, the Endangered Species Act, the California Endangered Species Act, the California Water Code, the public trust doctrine, or any other federal or California environmental resource protection law, or applicable federal or California regulations regarding their implementation.

(f) As used in this section, “environmental review process” does not include the Lower Colorado River Multi-Species Conservation Program established by the States of California, Arizona, and Nevada, as it may address impacts to the Colorado River.

SEC. 4. This act shall become operative only if SB 277 and SB 317 of the 2003–04 Regular Session are both chaptered and become effective on or before January 1, 2004.



EXHIBIT B

ENVIRONMENTAL COST SHARING AGREEMENT

**ENVIRONMENTAL COST SHARING, FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

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**ENVIRONMENTAL COST SHARING , FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

This Environmental Cost Sharing, Funding, and Habitat Conservation Plan Development Agreement ("Agreement") is entered into as of October 10, 2003 ("Agreement Date"), by and among the COACHELLA VALLEY WATER DISTRICT, a California county water district ("CVWD"); the IMPERIAL IRRIGATION DISTRICT, a California irrigation district ("IID"); and the SAN DIEGO COUNTY WATER AUTHORITY, a California county water authority ("SDCWA") (CVWD, IID, and SDCWA are sometimes referred to individually in this Agreement as "Party" and collectively as the "Parties").

RECITALS:

A. IID, MWD and CVWD have entered into the Quantification Settlement Agreement dated as of October 10, 2003 (the "QSA").

B. IID and SDCWA have executed an Agreement for Transfer of Conserved Water dated April 29, 1998, and various amendments thereto (collectively, the "1998 IID/SDCWA Transfer Agreement") subject to environmental review and other conditions, which describes certain proposed activities involving the conservation of water by IID and the transfer of the conserved water to SDCWA.

C. IID and SDCWA have entered into an agreement dated January 27, 2000 to share certain costs related to the environmental review and compliance process and other state and federal approvals required to satisfy conditions necessary to implement the transactions described in the 1998 IID/SDCWA Transfer Agreement on the terms set forth therein (as the same may be amended from time to time, the "IID/SDCWA Cost Sharing Protocol).

D. The State of California has enacted the QSA Legislation as defined in the QSA.

E. The Parties and the State of California have executed the QSA-JPA as defined in the QSA, which provides, among other things, that Environmental Mitigation Costs for the IID water budget and certain IID transfers pursuant to the QSA and Related Agreements in excess of one hundred thirty-three million dollars (\$133,000,000) in Effective-Date Dollars shall be the exclusive responsibility of the State of California so as to ensure compliance with all federal and state environmental laws, including but not limited to the federal Endangered Species Act, federal Clean Air Act, and federal Clean Water Act.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises set forth herein, the Parties hereby agree as follows:

**ARTICLE 1
DEFINITIONS**

1.1. Incorporated Definitions. The terms with initial capital letters that are used in this Agreement shall have the same meaning as set forth in Section 1.1 of the QSA, as of the Closing Date of the QSA, unless the context otherwise requires.

1.2. **Additional Definitions.** The following terms with initial capital letters shall have the meaning as set forth below.

(1) **Changed Circumstances.** Changes in circumstances affecting a species or the geographic area covered by the HCP that can reasonably be anticipated by the parties and that can reasonably be planned for in the HCP (e.g. a fire or other natural catastrophic event in areas prone to such event.) Changed Circumstances and the planned responses to those circumstances are described in the Draft HCP.

(2) **Class A Covered Species.** The species identified in Table 1.5-1 of the Draft HCP, but excluding the 25 species identified in Table 3.9-1 of the Draft HCP.

(3) **Class B Covered Species.** The species identified in Table 3.9-1 of the Draft HCP.

(4) **Costs.** All out of pocket costs reasonably incurred by a Party for a specified purpose pursuant to this Agreement, including, but not limited to, financing costs, costs of the Parties' staff, contractors, equipment, and real and personal property. The cost of real property shall be determined by its fair market value as defined in California Code of Civil Procedure §§ 1263.310 *et seq.*

(5) **Covered Activities.** Those activities described as Covered Activities in the Draft HCP.

(6) **Covered Species.** Class A Covered Species and Class B Covered Species.

(7) **Decision Date.** October 10, 2003.

(8) **Draft HCP.** The draft Habitat Conservation Plan dated June 2002 and included in the Final EIR/EIS for the IID Water Conservation and Transfer Project, as certified by the IID Board on June 28, 2002.

(9) **Environmental Litigation Costs.** All Costs reasonably incurred by any Party to defend any litigation involving transactions contemplated by the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement that challenges in whole or in part compliance with applicable environmental laws and regulations or any permit, appraisal, authorization, opinion, assessment or agreement pursuant to any other federal or any state resource protection law or applicable federal or state regulation implementing same.

(10) **Environmental Mitigation Costs.** All Costs reasonably incurred by any Party to satisfy the Environmental Mitigation Requirements. Reasonable attorneys' fees incurred for legal services related to the financing of environmental mitigation expenses shall be included as Mitigation Costs, but no other attorneys' fees incurred by any Party shall be included.

(11) **Environmental Mitigation Requirements.** Any measure required as a result of any Environmental Review Process for activities which are part of or in furtherance of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement or the

Project described in the Final EIR/EIS for the IID Water Conservation and Transfer Project, certified by IID on June 28, 2002, as modified and supplemented by the Addendum thereto dated September 2003, but still including the Draft HCP, the HCP Mitigation Requirements, the transfer of up to 145 KAF in the aggregate as an Interim Surplus Backfill as referenced in the IID/DWR Transfer Agreement, and including the arrangement for ensuring adequate funding to pay for all required measures, but excluding activities and Costs incurred to address:

- (i) Environmental impacts within the CVWD, and SDCWA service areas other than impacts related to the Salton Sea within the CVWD service area;
- (ii) Environmental impacts associated with the All-American Canal and the Coachella Canal lining projects;
- (iii) Environmental impacts associated with the Lower Colorado River, other than impacts that are attributable to the transfer of Conserved Water from IID to SDCWA pursuant to the 1998 IID/SDCWA Transfer Agreement; and
- (iv) Any socioeconomic impacts.

(12) **Environmental Review Costs.** All Costs, including attorneys' fees, reasonably incurred by any Party in connection with any Environmental Review Process. Environmental Review Costs incurred prior to the Agreement Date shall be governed by Section 3.1 and shall not be included in Environmental Mitigation Costs.

(13) **Environmental Review Process.** Any process:

- (i) To conduct environmental review and/or assessment required under CEQA, NEPA and applicable federal, state and agency regulations implementing those statutes;
- (ii) To obtain any permit, approval, authorization, opinion, assessment or agreement pursuant to the Endangered Species Act ("ESA"), the California Endangered Species Act ("CESA"), the Natural Community Conservation Planning Act ("NCCPA"), the state and federal air quality laws, the California Water Code, the public trust doctrine, or any other federal or state environmental resource protection law or applicable federal or state regulations implementing same; and/or
- (iii) To study and/or design any mitigation required to comply with CEQA, NEPA, ESA, CESA, NCCPA, the state and federal air quality laws, the California Water Code, or any other federal or state resource protection law or applicable federal or state regulations implementing same;
- (iv) But not the Lower Colorado River Multi-Species Conservation Program among the States of California, Arizona and Nevada.

(14) **Expected Environmental Mitigation Costs.** The estimated present value costs of satisfying the Environmental Mitigation Requirements, which are stated and described in Exhibit A, attached hereto.

(15) **Expected HCP Mitigation Costs.** That portion of the Expected Environmental Mitigation Costs attributable to the HCP Mitigation Requirements, such Costs being described in Exhibit A.

(16) **HCP Mitigation Requirements.** All Environmental Mitigation Requirements described in Exhibit B attached hereto, and any modified or additional mitigation requirements that may be created pursuant to the HCP described in Section 5 herein. HCP Mitigation Requirements include, but are not limited to, actions to avoid, reduce, minimize, mitigate, or compensate for impacts on Covered Species and their habitat, and also actions to enhance the survival or recovery of the Covered Species.

(17) **Parties' Funds.** Funds required to be provided by the Parties to the QSA-JPA for Environmental Mitigation Requirements in the amounts set forth on Exhibit E.

(18) **Permits.** Collectively, incidental take permits issued by the U.S. Fish and Wildlife Service pursuant to 16 U.S.C. Section 1539(a)(1)(B) and by the California Department of Fish and Game pursuant to Fish and Game Code Sections 2081 and 2835.

(19) **Permit Effective Date.** The date the Permits take effect under applicable laws and regulations.

(20) **Remaining Environmental Mitigation Costs.** Environmental Mitigation Costs in excess of such Costs paid by the Parties' Funds.

(21) **Resource Approval Requirements.** The respective actions and responsibilities of the Parties, as lead agency or otherwise, undertaken in connection with the Resource Approvals contemplated by Section 6.2(2)(ii) of the QSA.

(22) **Review Requirements.** The Environmental Review and assessments undertaken by the respective Parties, as lead agency or otherwise.

(23) **State Obligation.** The amount, if any, of the Environmental Mitigation Costs required to be paid by the State of California pursuant to the QSA-JPA. The Parties understand the State Obligation to be an unconditional contractual obligation of the State of California not dependent on any further State action, and are relying on the State Obligation in order to comply with the extensive state and federal requirements that mandate Environmental Mitigation Requirements. In addition, the Parties are relying on the State Obligation in making contracts with third parties, including without limitation, landowners and farmers in the Imperial Valley who will be entering contracts to produce conserved water.

(24) **State Loan Guarantee.** A binding commitment by the California Infrastructure & Economic Development Bank to unconditionally guarantee the repayment in full of any outstanding debt incurred by the IID to fund capital improvements for the creation of Conserved Water provided for under the QSA and its Related Agreements, in an amount not to exceed One Hundred Fifty Million Dollars (\$150,000,000) in 2003 dollars, in the event that the QSA term ends prior to Year 45 of the QSA or, in lieu of an unconditional guarantee, a reasonable economic equivalent. Such guarantee shall be without any rights of recourse, subrogation, reimbursement, contribution or indemnity against the IID.

(25) **Unexpected Environmental Mitigation Costs.** Any Costs required for satisfaction of Environmental Mitigation Requirements that exceed Expected Environmental Mitigation Costs.

(26) **Unexpected HCP Mitigation Costs.** Any Costs required for satisfaction of HCP Mitigation Requirements that exceed Expected HCP Mitigation Costs.

(27) **Unforeseen Circumstances.** Changes in circumstances affecting a species or geographic area covered by the HCP that could not reasonably have been anticipated by IID at the time of the preparation of the Draft HCP.

(28) **Wildlife Agencies.** Collectively, the U.S. Fish and Wildlife Service ("USFWS") and the California Department of Fish and Game ("CDFG").

1.3. Rules of Construction and Word Usage. Unless the context clearly requires otherwise:

(1) The Recitals to this Agreement are a part of this Agreement to the same extent as the Articles;

(2) The Exhibits attached to this Agreement are incorporated by reference and are to be considered part of the terms of this Agreement;

(3) The plural and singular numbers include the other;

(4) The masculine, feminine, and neuter genders include the others;

(5) "Shall," "will," "must," and "agrees" are each mandatory;

(6) "May" is permissive;

(7) "May not" is prohibitory;

(8) "Or" is not exclusive;

(9) "Includes" and "including" are not limiting;

(10) "Between" includes the ends of the identified range; and

(11) "Person" includes any natural person or legal entity.

ARTICLE 2 ENVIRONMENTAL MITIGATION MANAGEMENT

2.1. Ongoing Review Requirements. The Parties will cooperate and consult with one another with a view to assuring the timely and proper completion of all environmental reviews and assessments.

2.2. Ongoing Resource Approval Requirements.

(1) **Primary Responsibility.** After the Agreement Date, each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to any resource approval shall obtain the prior consent of the other Parties (which consent may not be unreasonably withheld) before entering into a binding agreement with any person, including a Party, which contains terms and conditions pertaining to such approval requiring the incurrence of significant Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely acquisition of all resource approvals.

2.3. Mitigation Implementation Measures.

(1) **Primary Responsibility.** Each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to the acquisition, construction or carrying out of Environmental Mitigation Requirements that will result in Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement shall exercise due care and prudence in the making of any decision and the performance of any activity relating to such measures.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely and proper implementation of all Environmental Mitigation Requirements described in Section 2.3(1) at a reasonable cost consistent with the Parties' interests in minimizing their respective obligations under this Agreement and the public interest.

ARTICLE 3 ENVIRONMENTAL REVIEW AND LITIGATION COSTS

3.1. Environmental Review Costs. Within thirty (30) days after the Agreement Date, CVWD shall pay IID Two Hundred Thousand Dollars (\$200,000). Except for the foregoing, and except as otherwise provided for in this Agreement or as a Party and one or more of the other Parties may otherwise agree under the IID/SDCWA Cost Sharing Protocol or under any other cost sharing protocol or similar written arrangement, each Party shall bear its own Environmental Review Costs incurred prior to or after the Effective Date.

3.2. Environmental Litigation Costs. It is contemplated that the Parties will join in the defense of any environmental litigation pertaining to the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. Each Party shall bear its own Environmental Litigation Costs incurred in connection with any such defense, except as such Party may otherwise agree pursuant to a joint defense agreement between or among one or more of the other Parties pertaining to any such defense and specifying the respective responsibilities of the parties to such agreement, including any cost-sharing with respect thereto.

3.3. Federal Agency Reimbursement Claims. If BOR, the USFWS, or any other federal agency request the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

3.4. California Agency Reimbursement Claims. If the CDFG, or any other California State agency, requests the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements, or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

ARTICLE 4 ENVIRONMENTAL MITIGATION COSTS

4.1. Allocation of Environmental Mitigation Costs.

(1) **In General.** Environmental Mitigation Costs shall be paid to the QSA-JPA from the Parties' Funds in the amounts set forth in Exhibit D and on the schedules attached as exhibits to the QSA-JPA.

(2) **IID Contribution.** IID's total payments of Environmental Mitigation Costs shall not exceed Thirty Million Dollars (\$30,000,000), as described in the 1998 IID/SDCWA Transfer Agreement, as amended as of the Closing Date of the QSA, and paid on the schedule attached to the QSA-JPA. IID shall also pay to the QSA-JPA the Settlement and Efficiency Opportunity Payment as required pursuant to the 1998 IID/SDCWA Transfer Agreement and IID/CVWD Acquisition Agreement on the schedule attached to the QSA-JPA.

(3) **Conditions Precedent.** As of the Closing Date, a binding commitment for the State Loan Guarantee in a form acceptable to the IID, and a binding commitment for the State Obligations in a form acceptable to the Parties shall have been obtained.

4.2. Payment of Unexpected and Remaining Environmental Mitigation Costs.

(1) **Unexpected Environmental Mitigation Costs.** Unexpected Environmental Mitigation Costs shall first be paid from any available Parties' Funds, and then from the State Obligation.

(2) **Remaining Environmental Mitigation Costs.** In the event that the State determines that the costs of Remaining Environmental Mitigation Costs during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement under this Section 4.2(2) would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by the Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected, Unexpected or Remaining Unexpected Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

4.3. Payment and Reimbursement of Environmental Mitigation Costs, as Incurred.

(1) **In General.** Each Party will maintain proper accounting records detailing the Environmental Mitigation Costs paid by it to the QSA-JPA. Except as may otherwise be agreed by the Parties, indirect costs shall not be counted as incurred costs. For purposes of this Agreement, “indirect costs” include, but are not limited to, overhead costs, losses of revenue from any source and other opportunity costs of any kind.

(2) **Quantification of Incurred Costs.** Each Party will provide to the other Parties within 30 days after the end of each calendar quarter a detailed report setting forth the Environmental Mitigation Costs paid by it during such quarter. The form of such report will be as agreed from time to time by the Parties. Each such report will be subject to audit and verification by any Party, at that Party’s expense.

(3) **Costs In the Event of Termination.** If the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement are terminated, the obligation of the Parties’ Funds and of the State to pay for Environmental Mitigation Costs and Remaining Environmental Mitigation Costs attributable to the impacts caused by the Conserved Water transferred or acquired during the term of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement shall continue as long as Environmental Mitigation is necessary to mitigate any continuing impacts that last beyond termination.

(4) In the event that the State determines that the costs of Remaining Environmental Mitigation Costs after termination of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement under this Section 4.3(4) would be reduced if modification were made to IID’s operations or to the operations of a farmer within IID’s service area, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Remaining Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of

different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

In the event that the State determines that the costs referred to in the preceding paragraph could be reduced through modification of the operations of a farmer within the IID service area, the State shall notify IID of the estimated amount of such reduction in costs and shall request that IID request that the farmer take such action and/or modify operations so as to reduce said costs. IID shall thereupon determine whether the requested modification meets the requirements of subparagraphs (i) through (vi) of the preceding paragraph and if it does, shall request that the farmer undertake such modifications. If the farmer fails to undertake such modifications, the State shall not be obligated to pay any such costs to the extent that the requirement for such mitigation could be avoided or reduced by the requested changes.

ARTICLE 5 HABITAT CONSERVATION PLAN

5.1. Approval of HCP. Commencing with the Agreement Date, SDCWA and CVWD, in consultation and collaboration with IID, shall use their best efforts to cause the USFWS and the CDFG to approve, prior to December 31, 2006, a habitat conservation plan/natural community conservation plan ("HCP") and related Permits which satisfy all of the standards and criteria described in Section 5.2. The obligation to utilize such best efforts shall continue except to the extent that coverage of a species is deemed infeasible pursuant to Section 5.4 below. "Best efforts" means the prudent, diligent and good-faith efforts of SDCWA and CVWD to secure the HCP and related Permits as a fiduciary for the benefit of IID, but shall not require the expenditure by SDCWA and CVWD together of more than Five Million Dollars (\$5,000,000) in 2002 dollars to fund third-party consultants tasked with developing the HCP. CVWD shall not be required to commit its staff and in-house resources in excess of two qualified employee equivalents.

5.2. HCP Standards and Criteria. The HCP and the Permits shall:

(1) Comply with all applicable requirements of the ESA, CESA and Natural Community Conservation Planning Act;

(2) Provide IID with the authority to implement the Covered Activities in compliance with ESA and CESA;

(3) Provide IID with the authority to take the Covered Species incidental to the Covered Activities pursuant to ESA and CESA. Such take authority shall become effective no later than (i) the Permit Effective Date with regard to any Covered Species that is listed as an endangered species or threatened species under ESA as of the Permit Effective Date, (ii) the Permit Effective Date with regard to any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA as of the Permit Effective Date, (iii) immediately upon the listing (and without further action or approval by USFWS) of any other

Covered Species as a threatened species or endangered species pursuant to ESA after the Permit Effective Date, and (iv) immediately upon the listing (and without any further approval action or approval by CDFG) of any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA after the Permit Effective Date;

(4) Have a term of years not less than forty-five (45) years from the Permit Effective Date, except that coverage for the white pelican, black skimmer, and double-crested cormorant may be limited to a term of fifteen (15) years from the Permit Effective Date;

(5) Not impose on IID, or otherwise require IID to fund, support or implement, any Environmental Mitigation Requirements other than the HCP Mitigation Requirements described on Exhibit A. In no event shall IID be obligated to pay for any Costs of complying with or implementing the HCP or complying with the Permits, in excess of Section 4.1(2) or other limitation on IID's obligation to pay for mitigation costs.

(6) Include an Implementation Agreement among IID and the Wildlife Agencies that describes the rights and obligations of IID and the Wildlife Agencies with regard to the implementation of the HCP. The Implementation Agreement shall, at a minimum, include the following covenants in a form that is valid, binding and enforceable by IID:

(i) In the event of Unforeseen Circumstances, USFWS and CDFG will not require from IID the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources with regard to the impacts of the Covered Activities on the Covered Species;

(ii) Except for the HCP Mitigation Requirements described on Exhibit A, no limitations or restrictions shall be imposed on IID, either directly or indirectly, by USFWS or CDFG with regard to the impacts of the Covered Activities on the Covered Species or with regard to the impacts on the Covered Species attributable to Changed Circumstances;

(iii) USFWS shall agree that the Section 10(a) Permit shall constitute a Special Purpose Permit under 50 CFR section 21.27, for the take of all Covered Species identified at 50 CFR section 10.13, excluding bald eagles which are listed under ESA as of the Effective Date. The Special Purpose Permit shall be valid for a period of three (3) years from its Effective Date, provided the Section 10(a) Permit remains in effect for such period. The Special Purpose Permit shall be renewed, provided the IID remains in compliance with the terms of the Implementation Agreement and the Section 10(a) Permit. Each such renewal shall be valid for a period of three years, provided that the Section 10(a) Permit remains in effect for such period. USFWS will not refer the incidental take of any bald eagle, *Haliaeetus leucocephalus*, for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the Mitigation Requirements;

(iv) In any consultation that may be required or processed pursuant to Section 7 of ESA (16 U.S.C. section 1536(a)) with regard to the Covered Activities

analyzed in the ESA intra-Service Section 7 consultation for the HCP, the USFWS shall, to the maximum extent appropriate and permitted by law, rely upon, and utilize, the ESA biological opinion completed with regard to analysis of the HCP and, if appropriate, programmatic Section 7 opinions governing Covered Species;

(v) In the event that a critical habitat determination is made for any Covered Species, no additional Mitigation shall be required of IID that is in addition to the Mitigation Requirements; and.

(vi) Neither USFWS or CDFG shall suspend or revoke any of the Permits without first conducting a formal adjudicatory hearing substantially in accordance with the procedures applicable to hearings conducted pursuant to Sections 554-556 of the federal Administrative Procedure Act to the extent permitted by applicable law.

(7) Be authorized by complete and final environmental documentation pursuant to CEQA and NEPA.

5.3. Exceptions. Notwithstanding the provisions of Sections 5.1 and 5.2, above, SDCWA and CVWD shall not be required to provide coverage under the HCP for certain Covered Species if such coverage is deemed infeasible. Coverage shall be deemed infeasible under the following circumstances:

(1) As to Class B Covered Species, if, as of June 1, 2005, despite the best efforts of SDCWA and CVWD (i) the Wildlife Agencies determine (by final agency action) that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the Expected HCP Mitigation Costs;

(2) As to Class A Covered Species, SDCWA and CVWD shall have utilized their continuous best efforts until December 31, 2005, to obtain coverage for such species, but (i) the Wildlife Agencies have determined (by final agency action) as of December 31, 2006, that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the total amount of Expected HCP Mitigation Costs described in Exhibit A. In the event that IID is relieved of all obligations under applicable law and regulation to undertake some portion of the HCP Mitigation Requirements described in Exhibit B, the amount of Expected HCP Mitigation Costs for purposes of this Section 5.3 shall be adjusted to reflect any change in said requirements.

5.4. Revival of Efforts. In the event that coverage of a Class A or Class B Covered Species is deemed infeasible as of December 31, 2006, and June 1, 2005, respectively, pursuant to subsection 5.3(i) and (ii) above, and if new information becomes available which indicates

that approval of coverage of that species by the Wildlife Agencies is feasible and within the budget of Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), SDCWA and CVWD shall revive their best efforts to obtain coverage for that species.

5.5. Modifications to IID Operations. In the event that SDCWA and CVWD determine that the cost of satisfying the requirements of subsections 5.1 and 5.2, above, would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by USFWS and CDFG and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected HCP Mitigation Costs;

(v) The modification does not require a change in operations by any individual farmer(s);

(vi) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vii) If the modification involves terminating or reducing the operation of a capital project, then the affected owner/operator (IID or a farmer) has reasonably determined that the termination/reduction will not adversely affect its operations or farming, compared to conditions prior to the termination/reduction of operations.

5.6. Breach of Agreement. Any failure of the IID, SDCWA or CVWD to satisfy its respective obligations described in this Article 5 shall constitute a material breach of this Agreement. The Parties shall utilize the procedures of Sections 7.1 and 7.3 to resolve any dispute regarding the existence of a material breach under this Section.

5.7. Compliance with Laws. IID shall have the right, at any time during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, to cease any activity if IID, acting in good faith and after receiving a written notification or warning, determines that continuation of such activity will: (i) violate ESA, CESA, any regulations or

orders promulgated pursuant thereto, the terms and conditions of any ESA or CESA permit, approval or agreement; or (ii) otherwise violate applicable state, federal or local laws, ordinances or regulations, unless IID is immune from such liability pursuant to statute. Prior to making such determination, if circumstances permit, IID shall consult with the other Parties to this Agreement and with the Wildlife Agencies, and other agency with the authority to enforce the statute, regulation, permit, order or approval that is the subject of the proposed IID determination. IID shall not cease the activity if the agency with jurisdiction to enforce the applicable statute, regulation, permit, order or approval, provides IID with adequate assurances, in writing, that the continuation of the activity will not violate the applicable statute, regulation, permit, order or approval. IID must utilize a substitute activity for the ceased activity, if such substitute is environmentally, physically and economically available. Any additional costs for the substitute activity shall be treated as an Unexpected HCP Mitigation Cost.

ARTICLE 6 CONTRACT ADMINISTRATION

6.1. Contract Managers.

(1) **Designation of Contract Managers.** In order to facilitate and implement this Agreement, the contract manager designated by each Party herein shall be responsible for managing and implementing that Party's performance hereunder. Any Party may change its designated contract manager at any time by prior written notice to the other Parties. The initial contract managers are:

For CVWD:	Steve Robbins
For IID:	Tina A. Shields
For SDCWA:	Larry Purcell

(2) **Communications.** All correspondence, notices or other matters related to this Agreement, including payments, shall be directed to the appropriate contract manager designated above.

(3) **Administrative Protocols.** The contract managers will develop and amend from time to time written administrative protocols, subject in each case to the approval of the Parties or their delegates.

ARTICLE 7 DISPUTES

7.1. **Disputes Among or Between the Parties.** The Parties or their delegates shall seek to resolve any dispute concerning the interpretation or implementation of this Agreement through negotiation involving, as and when appropriate, the general manager or chief executive officer of each of the Parties. Any unresolved dispute among or between CVWD, IID and/or SDCWA under Articles 4 and 5 of this Agreement shall be resolved pursuant to Section 7.3. Any other unresolved dispute among or between Parties under this Agreement shall be resolved

by litigation pursuant to Section 7.2. The Parties consent to suit in Federal court to enforce the terms of this Agreement.

7.2. Action or Proceeding Between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to being transferred to a "Neutral County," or instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding. Each party therefore:

- (1) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;
- (2) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;
- (3) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and
- (4) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

Nothing in this section, however, impairs or limits the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

7.3. Resolution of Arbitration Disputes. Disputes among or between Parties under Articles 4 and 5 of this Agreement shall be resolved pursuant to the provisions of this Article.

(1) Any dispute which cannot be resolved by consensual agreement shall be resolved through binding arbitration by a panel of arbitrators in an arbitration proceeding conducted in a Neutral County, or such other location as the Parties may agree. Arbitration proceedings may be initiated by any Party sending a demand for arbitration to the other Parties in conformance with the Notice provisions of this Agreement. The Parties shall impanel a group of three (3) arbitrators by each selecting an arbitrator of its choice who shall then select the third (3rd) member of the panel. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. Prior to the commencement of proceedings, the appointed arbitrators will take an oath of impartiality. The Parties shall use their reasonable best efforts to have the arbitration proceeding concluded within ninety (90) Business Days.

(2) In rendering their determination, the arbitrators shall determine the rights and obligations of the Parties according to the substantive and procedural laws of California. All discovery shall be governed by the CCP with all applicable time periods for notice and scheduling provided therein being reduced by one-half (½). The arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding

compliance with discovery requests shall be decided by the arbitrators. A decision by two (2) of three (3) arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

(3) The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party(ies) against whom the decision is rendered. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the costs of the other Party(ies).

ARTICLE 8 GENERAL PROVISIONS

8.1. Term. This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date, except that the requirements of Section 4.3(5) shall survive the Termination Date.

8.2. Amendment. This Agreement may be amended only by a written instrument signed by the IID, SDCWA and CVWD.

8.3. Attorneys' Fees. If any Party commences a legal proceeding for any relief against any other Party to this Agreement arising out of this Agreement, the losing Party shall pay the prevailing Party's legal costs and expenses, including, but not limited to, reasonable attorneys' fees and court costs, except as may otherwise be specified in the decision or order entered in said proceeding.

8.4. Authority. Each Party represents and warrants that: (i) it has the requisite power and authority to enter into and perform its obligations under this Agreement; (ii) the individuals executing this Agreement on its behalf are the duly authorized agents of such Party and are authorized to do so under the Party's governing documents; and (iii) the terms of this Agreement are binding upon and enforceable against such Party in accordance with its terms.

8.5. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of which, taken together, shall constitute one and the same Agreement after each party has signed such a counterpart.

8.6. Effective Date. This Agreement shall be effective on the Effective Date of the QSA.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the Date first written above.

"CVWD"

COACHELLA VALLEY WATER DISTRICT

By: _____
Title: _____

"IID"

IMPERIAL IRRIGATION DISTRICT

By: _____
Title: _____

By: _____
Title: _____

"SDCWA"

SAN DIEGO COUNTY WATER AUTHORITY

By: _____
Title: _____

EXHIBIT A

General Notes

1. Except as noted, all costs are in year 2002 dollars. Future costs have been discounted 3% for present value estimates.
2. Costs for each measure include 3 phases: 1) design/permitting, 2) implementation/construction, and 3) operations & maintenance for the 45 year project period.
3. Costs for each measure are dependent on the specific timing and duration for each phase. Phases were initiated when necessary to provide offsets for expected impacts.
4. Stabilization of the receding Salton Sea shoreline utilizes gravel cover. Costs for alternative measures could vary substantially.
5. No costs are included for any unknown future mitigation measures that might arise from required studies.
6. No specific sites for habitat creation measures have been identified. Costs are planning estimates only and may change depending upon location, local economic conditions, final design, etc.
7. No additional commitment of land, water or other resources is required for adaptive management.
8. Attempts have been made to eliminate duplication of costs among measures.
9. Supporting documentation for each cost estimate is available at CVWD, IID, MWD, and SDCWA.

Estimated HCP Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) Yr 45	Notes and explanation of zero-cost items
General - 1	Hire full-time biologist to manage HCP and participate on HCP Implementation Team.	3,678	First year O&M \$150,000. Begins in 2003.
General - 2	Convene and facilitate HCP IT.	270	Reimbursement for CDFG and USFWS participation on HCP IT. IID biologist participation addressed in General-1. Begins in 2003.
Salton Sea - 2	Pupfish refugium pond.	340	Pond creation to be implemented at end of 15 Year Minimization Plan.
Salton Sea - 3	Tamarisk scrub habitat surveys and creation.	11,132	Surveys and habitat replacement to begin at end of 15 Year Minimization Plan. Maximum creation assumes 1321 acres.
Tree Habitat - 1	Tree habitat surveys and creation.	751	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 34.1 acres.

Tree Habitat - 2	Seepage community surveys and creation.	644	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 30 acres.
Tree Habitat - 3	Site surveys for construction scheduling.	7	Surveys to begin at start of efficiency conservation in 2008.
Drain Habitat - 1	Creation of managed marsh habitat.	23,682	73 acres to be implemented in 2003, 117 acres to be implemented at start of efficiency conservation period in 2008, plus the balance of 462 acres to be constructed starting in 2017. The maximum total acreage is 652. Water to sustain marsh is included at 12AF/acre/year with 50% from existing drainage and 50% from purchased irrigation water. Irrigation water assumed at \$16/AF. Redundant with SWRCB order.
Drain Habitat - 2	Avoid dredging river deltas between Feb. 15 and Aug. 31.	0	No additional costs assumed for scheduling of maintenance dredging.
Drain Habitat - 3	Site surveys to avoid construction disturbance of covered species.	0	No additional costs assumed for crews to survey areas for wildlife prior to beginning work.
Desert Habitat - 1	Worker education program - training and materials.	37	Begins in 2003.

Desert Habitat - 2	Precautions for workers during O&M of canals and drains.	38	Begins in 2003.
Desert Habitat - 3	Habitat surveys, construction monitoring, and vegetation restoration.	436	Begins in 2003.
Desert Habitat - 4	Habitat surveys and update worker manual.	476	Habitat surveys and worker training manual to begin in 2003.
Desert Habitat - 5	Desert habitat acquisition and management.	118	Habitat acquisition and management to begin at start of efficiency conservation in 2008. Maximum acquisition assumes 100 acres.
Owl - 1	Worker education program for canal and drain maintenance.	60	Begins in 2003. Some possible redundancy with Desert Habitat-1.
Owl - 2	Visual inspection of banks. Mark burrows. Develop standard operating procedures.	920	Operating procedures develop in 2006. Habitat protection measures begin at start of efficiency conservation period in 2008.
Owl - 3	Precautions for grading of spoils near canals and ditches.	0	No additional cost assumed for taking precautions during grading of spoils.
Owl - 4	Avoid disturbing burrows. Fill burrows to maintain channel.	2,014	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 5	Manage location and schedule of facility construction.	60	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 6	Maintain current techniques for canal and drain maintenance.	0	No additional cost assumed to maintain current techniques.
Owl - 7	Owl abundance, distribution, and demographic surveys.	532	Begins in 2003.

Owl - 8	Avoid disturbing burrows. Replace impacted burrows at 2:1 ratio.	344	Habitat replacement to begin at start of efficiency conservation period in 2008.
Owl - 9	Farmer and public education program.	43	Begins in 2003.
Pupfish - 1	Maintain current levels of pupfish habitat.	862	Habitat maintenance to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 2	Minimize selenium impacts on pupfish.	4,383	Drain channel management to begin at start of efficiency conservation in 2008. Redundant with SWRCB order.
Pupfish - 3	Modifications to increase amount of pupfish drain habitat.	3,658	Habitat creation to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 4	Protocol for surveys to monitor pupfish presence.	863	Protocol developed by start of efficiency conservation period in 2008.
Pupfish - 5	Evaluate effect of drain maintenance on pupfish.	45	Study begins at start of efficiency conservation period in 2008.
Pupfish - 6	Gradual dewatering and salvage of stranded pupfish.	3,469	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Razorback Suckers - 1	Salvage fish and return to Colorado River.	40	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.

Agriculture - 1	Install markers on tailwater pump power lines.	40	Marker installation begins at start of efficiency conservation period in 2008.
Agriculture - 2	Plant and maintain cover crops or ridge till lands to conserve water.	360	Begins in 2003.
Other Species - 1	Implement species surveys and submit study program.	738	Begins in 2003.
Other Species - 2	Implement impact avoidance and minimization measures.	817	Begins in 2004.
Monitoring and Adaptive Management	Monitoring and adaptive management described in Chapter 4 of draft HCP.	0	Costs included in individual measures listed above are assumed to cover adaptive management.
TOTAL HCP			60,857

Estimated 2002 Biological Opinion Portion of HCP Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost items.
15 Year Minimization Plan	Acquire and discharge water to the Salton Sea.	50,000	Water to avoid material change in Salton Sea elevation and salinity for 15 years. Redundant with SWRCB order.
Pupfish CM 2	Pupfish selenium toxicity study. Pupfish and selenium monitoring. Develop mitigation. Study of sources and management of selenium.	939	Begins in 2003. Includes selenium studies required by SWRCB.
Willow Flycatcher CM 1	Willow flycatcher breeding habitat evaluation.	228	Habitat surveys to begin at start of efficiency conservation period in 2008.
Willow Flycatcher CM 2	Habitat monitoring and replacement.	733	Habitat monitoring and replacement to begin at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 3	Long-term monitoring plan.	24	Management plan developed at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 4	Willow flycatcher take evaluation.	0	Addressed by Willow Flycatcher CM 1.
Brown Pelican CM 2	Roost site creation and monitoring.	1,175	No Year 1 capital cost; habitat creation to be implemented in 2009.
TOTAL 2002 BO			53,099

Estimated CEQA Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) Yr 45	Notes and explanation of zero-cost items
Water Quality WQ-2	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-4	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-5	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-7	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
QSA-WR-1	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
	Water Quality Subtotal	0	

Agricultural Resources				
AR-1	Prohibit use of non-rotational fallowing. Otherwise, no mitigation measures.	0	0	No costs for prohibiting use of non-rotational fallowing.
QSA-AR-1	Non-fallowing conservation measures or short term fallowing.	0	0	Addressed by measure AR-1.
SWRCB-HCP-AR-2	Conversion of up to 700 acres of prime farmland to create habitat.	0	0	Mitigation determined infeasible. Significant and unavoidable impact.
SWRCB-AR-1	Reclassify up to 50,000 acres of prime farmland or farmland of statewide importance.	0	0	Addressed by AR-1.
	Agricultural Resources Subtotal	0		
Recreation				
R-7	Temporary and permanent relocation of boat launch facilities.	1,600		Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 8 boat launch facilities relocated every 3 years through 2040 as necessary.
R-10	Temporary and permanent relocation of camping facilities.	2,889		Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 88 campsites relocated every 6 years through 2040 as necessary.
QSA-RR-3	Relocation of Salton Sea recreation facilities or use of Conserved Water.	0	0	Addressed by measures R-7 and R-10.
SWRCB-R-7	Temporary and permanent relocation of boat launching facilities.	0	0	Addressed by R-7.
SWRCB-R-8	Reduced sportfishing opportunities.	0	0	Addressed by 15 Year Minimization Plan.

SWRCB-R-9	Implement SSHCS to avoid salinity impacts.	0	Addressed by 15 Year Minimization Plan and Salton Sea 2.
SWRCB-R-10	Temporary and permanent relocation of campgrounds and ancillary facilities.	0	Addressed by R-10.
	Recreation Subtotal	4,489	

Air Quality			
AQ-2	Minimize PM10 emissions during construction and operation of efficiency conservation measures.	1,650	Begins in 2008. Redundant with SWRCB order.
AQ-3	Minimize PM10 emissions during following through conservation measures, soil stabilization, etc.	14,895	Cost includes first year following of 2,500 acres. Begins in 2003.
AQ-4	General conformity determination.	12	Begins in 2008.
AQ-7	Access restriction, research, monitoring. Obtain emission offsets and [or] direct emission reductions at the Sea.	36,774	Monitoring and research begins in 2008. Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan, and be implemented continuously for 20 years.
EJ-2	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
EJ-3	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
QSA-AQ-1	Construction SOPs and agricultural BMPs for dust control.	0	SOPs addressed in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-2	Construction BMPs for NOx, fugitive dust.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-3	Fugitive dust from decline in Salton Sea levels.	0	Addressed by AQ-7.
SWRCB-AQ-3	Dust control measures.	0	Addressed by AQ-3.

SWRCB-AQ-7	Access restriction, research, monitoring. Obtain emission offsets and direct emission reductions at the Sea.	0	Addressed by AQ-7.
	Air Quality Subtotal	53,331	
Cultural Resources			
CR-1	Cultural resource surveys prior to construction of water conservation measures.	31	Surveys to begin in 2003. Assumes preconstruction surveys for 100 sites over a 15 year period with 5 sites requiring testing and recovery.
CR-2	Protect cultural resources during construction and operation.	0	Addressed by CR-1.
CR-5	Protect cultural resources during reduced flow to Salton Sea. Conduct archaeological surveys.	87	Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan.
ITA-1	Control of public access on exposed tribal lands.	0	Addressed by CR-5.
QSA-CR-3	Cultural Resource Surveys.	0	Addressed by CR-5.
	Cultural Resources Subtotal	118	

Noise			
N-1	Permanent or temporary sound barriers for construction noise sources.	13	Barriers constructed at start of efficiency conservation period in 2008.
N-2	Permanent sound barriers for pumps in noise-sensitive areas.	15	Barriers constructed at start of efficiency conservation period in 2008.
N-3	Permanent sound barriers for interceptor pumps in noise-sensitive areas.	3	Barriers constructed at start of efficiency conservation period in 2008.
N-4	Permanent or temporary sound barriers for noisy equipment.	0	Addressed by N-1 through N-3.
QSA-N-1	Construction BMPs, sound barriers.	0	Addressed by N-1.
	Noise Subtotal	31	

Geologic Resources				
QSA-GSM-1	Minimize soil erosion through watering, paving, limiting vehicle speeds, crusting agents, and construction monitoring.	1,999	Includes storm water planning and related BMPs. PM10 dust control elements addressed by AQ-2.	
QSA-GSM-3	Construction BMPs for soil erosion. Monitor water levels for risk of liquefaction.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2, AQ-3 and QSA-GSM-1.	
	Geologic Resources Subtotal	1,999		
Hazards				
QSA-HHM-1	Assess impacts on local emergency response plans. Complete Phase I studies for potential contamination.	268	Assessment to be implemented at start of efficiency conservation period in 2008. Assumes 10 sites require assessment and 5 sites require a Phase 1 audit.	
	Hazards Subtotal	268		
Aesthetics				
A-1	Relocate recreation facilities and develop interpretive facilities and materials.	0	Costs addressed in measures R-7 and R-10.	
SWRCB-A-1	Aesthetic impacts from drop in Salton Sea level.	0	Addressed by 15 Year Minimization Plan and A-1.	
	Aesthetics Subtotal	0		
	TOTAL CEQA	60,236		

Estimated CESA 2081 Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2003), Yr 45	Notes and explanation of zero-cost items.
Backwater/Marsh	Create and maintain 16.25 acres of marsh and backwater habitat	1,268	Begins 2003, to be completed within 5 years
TOTAL CESA 2081		1,268	

Note: CESA LCR 2081 cost estimate is for mitigation acreage and actions that are in addition to those required in the 2001 Lower Colorado River BO, and assumes that BO measures will be acceptable as satisfaction of comparable 2081 requirements.

Estimated 2001 Lower Colorado River BO Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2001) - Yr 45	Notes and explanation of zero-cost items
Conservation Measure 1	Stock 10,000 sub-adult razorback suckers into the Colorado River	*	Included in funding agreement
Conservation Measure 2	Create, restore, and maintain 38.25 acres of marsh and backwater habitat	*	Included in funding agreement
Conservation Measure 3	Fund the capture of wild-born or F1 generation bonytails	*	Included in funding agreement
Conservation Measure 4	Restore and maintain 186 acres of southwestern willow flycatcher habitat along the LCR between Parker and Imperial Dams	*	Included in funding agreement
TOTAL 2001 BO		3,000	

* Mitigation Measures shall be accomplished through an agreement with the U.S. Bureau of Reclamation, under which Reclamation shall undertake all required measures in the 2001 LCR BO attributable to the transfer of 200,000 AFY in return for payment of \$3 million in 2001 dollars.

EXHIBIT B

HCP Mitigation Requirements

The HCP Mitigation Requirements include the following measures and requirements, all as described in greater detail in the June 2002 Draft HCP and the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service, as applicable:

June 2002 Draft HCP:

General – 1

General – 2

Salton Sea – 2

Salton Sea – 3, except that the survey of the areas designated as shoreline strand and adjacent wetland shall commence in 2018.

Tree Habitat – 1; Tree Habitat – 2; Tree Habitat – 3

Drain Habitat – 1; Drain Habitat – 2; Drain Habitat – 3

Desert Habitat – 1; Desert Habitat – 2; Desert Habitat – 3; Desert Habitat – 4; Desert Habitat – 5

Owl – 1; Owl – 2; Owl – 3; Owl – 4; Owl – 5; Owl – 6; Owl – 7; Owl-8; Owl-9

Pupfish -1; Pupfish -2; Pupfish – 3; Pupfish – 4; Pupfish – 5; Pupfish –6;

Razorback Suckers – 1

Agriculture – 1; Agriculture – 2

Other Species – 1

Other Species – 2

The monitoring and adaptive management requirements described in Chapter 4 of the Draft HCP.

2002 Biological Opinion

The 15-Year Minimization Plan described on page 17-18 of the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service

Pupfish Conservation Measure 2

Willow Flycatcher Conservation Measures 1, 2, 3, and 4

Brown Pelican Conservation Measure 2

Exhibit D

Use of Party Funds

<i>Expenditure</i>	<i>Millions (present value as of 2003)</i>
Environmental Mitigation Requirements	
Salinity Control of Salton Sea	\$ 50.0
Other Environmental Mitigation Requirements	<u>\$ 83.0</u>
Total Environmental Mitigation Requirements	\$133.0

Exhibit E

Party Commitments to Fund Environmental Mitigation Costs

<i>Party</i>	<i>Amount (present value as of 2003)</i>
Imperial Irrigation District	\$44,061,350
Coachella Valley Water District	\$36,717,791
San Diego County Water Authority	\$52,220,859
TOTAL	\$133,000,000

EXHIBIT C
(Including Exhibits C-1, C-2 and C-3)
PAYMENT SCHEDULES

EXHIBIT C-1

CVWD JPA Payments

	Year		27.61%
0	2003	\$	1,645,504
1	2004	\$	726,170
2	2005	\$	773,682
3	2006	\$	924,507
4	2007	\$	1,058,375
5	2008	\$	1,546,371
6	2009	\$	5,724,756
7	2010	\$	1,947,996
8	2011	\$	2,169,002
9	2012	\$	2,458,299
10	2013	\$	3,688,032
11	2014	\$	3,720,930
12	2015	\$	4,272,431
13	2016	\$	5,803,865
14	2017	\$	7,182,291
15	2018	\$	11,875,345
16	2019	\$	745,350
17	2020	\$	738,869
18	2021	\$	2,697,555
19	2022	\$	2,706,745
20	2023	\$	6,953,711
21	2024	\$	2,748,523
22	2025	\$	1,446,565
23	2026	\$	-
24	2027	\$	-
25	2028	\$	-
26	2029	\$	-
27	2030	\$	-
28	2031	\$	-
29	2032	\$	-
30	2033	\$	-
31	2034	\$	-
32	2035	\$	-
33	2036	\$	-
34	2037	\$	-
35	2038	\$	-
36	2039	\$	-
37	2040	\$	-
38	2041	\$	-
39	2042	\$	-
40	2043	\$	-
41	2044	\$	-
42	2045	\$	-
43	2046	\$	-
44	2047	\$	-
45	2048	\$	-
	Nominal:	\$	73,554,872
	6.0% PV:	\$	36,717,791

EXHIBIT C-2
IID JPA Payments

<i>Year</i>	
2003	\$ 131,395
2004	\$ 270,674
2005	\$ 418,191
2006	\$ 574,316
2007	\$ 739,432
2008	\$ 761,615
2009	\$ 941,356
2010	\$ 1,131,196
2011	\$ 1,331,579
2012	\$ 1,542,967
2013	\$ 1,765,841
2014	\$ 1,818,816
2015	\$ 1,873,380
2016	\$ 1,929,582
2017	\$ 1,987,469
2018	\$ 2,661,221
2019	\$ 3,373,610
2020	\$ 4,126,346
2021	\$ 4,473,828
2022	\$ 4,608,043
2023	\$ 4,746,284
2024	\$ 4,888,673
2025	\$ 5,035,333
2026	\$ 5,186,393
2027	\$ 5,341,985
2028	\$ 5,502,244
2029	\$ 5,667,311
2030	\$ 5,837,331
2031	\$ 6,012,451
2032	\$ 6,192,824
2033	\$ 6,378,609
2034	\$ 6,569,967
2035	\$ 6,767,066
2036	\$ 6,970,078
2037	\$ 7,179,181
2038	\$ 7,394,556
2039	\$ 7,616,393
2040	\$ 7,844,884
2041	\$ 8,080,231
2042	\$ 8,322,638
2043	\$ 8,572,317
2044	\$ 8,829,487
2045	\$ 9,094,371
2046	\$ 9,367,202
2047	\$ 9,648,218
Cumulative	\$209,506,885
Present Value	\$ 44,061,350

EXHIBIT C-3

SDCWA JPA Payments

	Year		39.26%
0	2003	\$	2,340,273
1	2004	\$	1,032,775
2	2005	\$	1,100,347
3	2006	\$	1,314,855
4	2007	\$	1,505,244
5	2008	\$	2,199,283
6	2009	\$	8,141,875
7	2010	\$	2,770,483
8	2011	\$	3,084,803
9	2012	\$	3,496,247
10	2013	\$	5,245,201
11	2014	\$	5,291,989
12	2015	\$	6,076,346
13	2016	\$	8,254,386
14	2017	\$	10,214,814
15	2018	\$	16,889,380
16	2019	\$	1,060,053
17	2020	\$	1,050,836
18	2021	\$	3,836,522
19	2022	\$	3,849,593
20	2023	\$	9,889,722
21	2024	\$	3,909,010
22	2025	\$	2,057,337
23	2026	\$	-
24	2027	\$	-
25	2028	\$	-
26	2029	\$	-
27	2030	\$	-
28	2031	\$	-
29	2032	\$	-
30	2033	\$	-
31	2034	\$	-
32	2035	\$	-
33	2036	\$	-
34	2037	\$	-
35	2038	\$	-
36	2039	\$	-
37	2040	\$	-
38	2041	\$	-
39	2042	\$	-
40	2043	\$	-
41	2044	\$	-
42	2045	\$	-
43	2046	\$	-
44	2047	\$	-
45	2048	\$	-
		Nominal:	\$ 104,611,375
	6.0%	PV:	\$ 52,220,859

EXHIBIT D

SCHEDULE FOR PAYMENT TO IID FOR MITIGATION WATER

<i>Year</i>	Mitigation Water	<i>Mitigation Payments</i>
2003	5,000	\$454,335
2004	10,000	\$933,658
2005	15,000	\$1,439,001
2006	20,000	\$1,971,431
2007	25,000	\$2,532,056
2008	25,000	\$2,601,688
2009	30,000	\$3,207,881
2010	35,000	\$3,845,447
2011	40,000	\$4,515,654
2012	45,000	\$5,219,814
2013	70,000	\$8,343,002
2014	90,000	\$11,021,702
2015	110,000	\$13,841,421
2016	130,000	\$16,807,889
2017	150,000	\$19,927,045

- Present Value of Payments: \$50 million
- Interest rate: 6% per Exhibit A of Environmental Cost Sharing Agreement

EXHIBIT E
IID PAYMENTS TO SALTON SEA RESTORATION FUND

Year	
2003	\$29,638
2004	\$61,054
2005	\$94,329
2006	\$129,545
2007	\$166,789
2008	\$171,793
2009	\$212,336
2010	\$255,157
2011	\$300,356
2012	\$348,038
2013	\$398,310
2014	\$410,259
2015	\$422,567
2016	\$435,244
2017	\$448,301
2018	\$600,275
2019	\$760,965
2020	\$930,755
2021	\$1,009,134
2022	\$1,039,408
2023	\$1,070,590
2024	\$1,102,708
2025	\$1,135,789
2026	\$1,169,863
2027	\$1,204,959
2028	\$1,241,108
2029	\$1,278,341
2030	\$1,316,691
2031	\$1,356,192
2032	\$1,396,878
2033	\$1,438,784
2034	\$1,481,947
2035	\$1,526,406
2036	\$1,572,198
2037	\$1,619,364
2038	\$1,667,945
2039	\$1,717,983
2040	\$1,769,523
2041	\$1,822,608
2042	\$1,877,287
2043	\$1,933,605
2044	\$1,991,613
2045	\$2,051,362
2046	\$2,112,903
2047	\$2,176,290
Cumulative Value	\$47,257,190
Present Value	\$9,938,650

**AMENDMENT TO THE APPROVAL AGREEMENT AMONG
THE IMPERIAL IRRIGATION DISTRICT, THE METROPOLITAN WATER
DISTRICT OF SOUTHERN CALIFORNIA, PALO VERDE IRRIGATION DISTRICT
AND COACHELLA VALLEY WATER DISTRICT**

THIS AMENDMENT to the December 19, 1989 Approval Agreement is made and entered into the 10th day of October, 2003, by and between Imperial Irrigation District, a California irrigation district (IID), The Metropolitan Water District of Southern California, a California metropolitan water district (MWD), Palo Verde Irrigation District, a California irrigation district (PVID), and Coachella Valley Water District, a California county water district (CVWD) each of which is at times referred to individually as "Party" and which are at times collectively referred to as "Parties".

RECITALS

RECITALS, A. through E., G., and H. in the Approval Agreement remain in effect; the Recitals are hereby amended by deleting the last sentence and replacing it with a new sentence at the end of Recital F.; and Recital I is added. Recital F. and Recital I., as amended, will read as follows:

"F. IID, MWD, and CVWD recognize that they have differences of opinion over various legal questions. CVWD has filed a complaint entitled Coachella Valley Water District v. Imperial Irrigation District, et al. in the United States District Court for the Southern District of California alleging, among other things, that the Conservation Agreement is unlawful and void. Irrespective of these differences of opinion, each Party wishes to settle the pending litigation and allow the Conservation Agreement, as modified by this Approval Agreement, to be implemented without regard to current or future legal differences and without further proceedings in the pending litigation of the CVWD complaint. In entering into this Approval Agreement, each Party agrees that nothing in this Approval Agreement or in the Conservation Agreement, and no action or failure to act in connection with the adoption or implementation of this Approval Agreement or the Conservation Agreement, is intended to or should have the effect of adding to or subtracting from the legal positions heretofore or hereafter taken by any Party as to all water other than the Conserved Water, as if the Conservation Agreement and this Approval Agreement did not exist. Except for conserved water made available by the construction and implementation of projects set forth herein and in the Conservation Agreement, the Parties' water rights may be exercised in any lawful manner consistent with the Quantification Settlement Agreement among IID, MWD, and CVWD dated as of October 10, 2003 (the "Quantification Settlement Agreement") and the related Acquisition Agreements (as defined therein)."

"I. The Parties desire to amend the Approval Agreement as contemplated by the Quantification Settlement Agreement and the related Acquisition Agreements."

NOW THEREFORE, for and in consideration of amended mutual obligations and undertakings set forth herein, the Parties hereby agree as follows:

1. AMENDMENT TO SECTION 1.1

The portion of the first sentence, on Page 4, of Section 1.1, Article I beginning with “; and (iii)”, through the end of the paragraph is hereby deleted in its entirety. Section 1.1 will read, as amended, as follows:

“Section 1.1: The Parties agree that: (i) nothing in this Approval Agreement or the Conservation Agreement shall change the Seven Party Agreement dated August 18, 1931, which provides the schedule of priorities for use of the waters of the Colorado River within California as published in Section 6 of the General Regulations of the Secretary of the Interior (Secretary) dated September 28, 1931, and incorporated in the United States water delivery contracts with the Parties dated December 1, 1932 (IID), September 28, 1931 (MWD), February 7, 1933 (PVID), and October 15, 1934 (CVWD); and (ii) IID’s, MWD’s, PVID’s, and CVWD’s use of the Conserved Water shall be in accordance with the terms of the Conservation Agreement, as modified by this Approval Agreement.”

2. AMENDMENT TO SECTION 2.1

On Page 6, fifth line, after the word “CVWD” insert “through October 30, 2003. Effective October 31, 2003, the Measurement Committee shall be composed of all members of the Program Coordinating Committee, and one representative from PVID.”

Section 2.1 will read, as amended, as follows:

“Section 2.1: Water Conservation Measurement Committee. It is recognized and agreed that the estimates contained in the Conservation Agreement and this Approval Agreement of the amount of water to be conserved annually by the C&A Programs and the amount to be conserved by each project of the C&A Programs are based on information and data available to IID and MWD at this time, but that the initial and subsequent verification provided in Section 2.2 of this Approval Agreement may result in a determination of a different total amount of water conserved and different amounts conserved by the individual projects of the C&A Programs. In order to provide an orderly basis among the Parties for such verification, there shall be established a Water Conservation Measurement Committee (Measurement Committee) whose duties and responsibilities are limited solely to those specified in Section 2.2 of this Approval Agreement. To the extent the duties and responsibilities of the Measurement Committee with regard to the verification of the quantity of water conserved from the C&A Programs and the process of determining the amount of water conserved are duplicative or in conflict with the duties and responsibilities of the Program Coordinating Committee (as stated in the Conservation Agreement), the duties and responsibilities of the Measurement Committee with regard to the verification of the quantity of water conserved from the C&A Programs and the process of determining the amount of water

conserved as set forth in this Approval Agreement shall govern. The Measurement Committee shall be composed of all members of the Program Coordinating Committee, and one representative each from PVID and CVWD through October 30, 2003. Effective October 31, 2003, the Measurement Committee shall be composed of all members of the Program Coordinating Committee, and one representative from PVID. The chairman of the Program Coordinating Committee shall also serve as the chairman of the Measurement Committee. The members of the Program Coordinating Committee shall be registered as professional engineers, including civil, agricultural, or other appropriate fields of engineering, and the chairman thereof shall be independent and have no past, present, or pending relationship with the Parties, unless IID and MWD expressly consent thereto. Payment of the expenses of the Program Coordinating Committee members shall be governed by the provisions of the Conservation Agreement. Payment of the expenses of the other members of the Measurement Committee shall be borne by the Party they represent. Each member of the Measurement Committee shall have technical competence in the design, construction, or operation of major water supply facilities. PVID's and CVWD's members of the Measurement Committee shall be designated within 30 days after the effective date of the Conservation Agreement and may be replaced at the pleasure of their appointing agency. Following initial selection of the members, all changes in the membership shall be made promptly and in such fashion that it will not interfere with the duties and responsibilities of the Measurement Committee. By unanimous written agreement among all the Parties, the duties and responsibilities of the Measurement Committee may be modified. The chairman of the Measurement Committee shall schedule meetings of the Measurement Committee upon request of any member of the Measurement Committee and shall provide each member of the Measurement Committee 15 days' notice of the time, place, and subject of the meeting. All decisions of the Measurement Committee shall be by a unanimous vote, recorded in writing, and consistent with the terms of this Approval Agreement. In the event that all Measurement Committee members are not present, a letter with the proposed action shall be sent to the absent member(s) by registered or certified mail, postage prepaid, return receipt requested. If no written protest from the absent member(s) is received by the Measurement Committee chairman within 30 days of the date of the receipt of the Measurement Committee letter, the decision shall be deemed unanimous and shall become final. Should the Measurement Committee not reach a decision by unanimous vote on any matter, that matter shall be resolved under Section 2.3 of this Approval Agreement. Notwithstanding the foregoing sentence, modification of the duties and responsibilities of the Measurement Committee may only be made by unanimous agreement among the Parties, and are not subject to change by Section 2.3 of this Approval Agreement."

3. AMENDMENT TO SECTION 2.2

On Page 9, tenth line of the partial paragraph, after the word "Agreement" insert "." and in the eleventh line delete the words "except as provided in Article III of this Approval Agreement."

On Page 10, twenty-fifth line of the partial paragraph, after the word "other", insert the phrase "force majeure type".

On Page 12, fourth line of the partial paragraph, after the word "implementation" insert the phrase "but will not decline."

Section 2.2 will read, as amended, as follows:

"Section 2.2. Duties and Responsibilities of the Measurement Committee.

Within one year after the effective date of the Conservation Agreement, the Measurement Committee shall designate one or more consultants with recognized competence in water conservation and measurement activities. IID shall retain the consultant(s) on behalf of the Measurement Committee. Payment of the expenses of the consultant(s) shall be paid as a capital or annual direct cost by MWD under the Conservation Agreement. The consultant(s) shall serve at the pleasure of the Measurement Committee. During the construction period of the C&A Programs, the consultant(s) will be available to IID to advise IID of the measuring devices and techniques that should be used for the measurement of water conserved from the C&A Programs, and within six months after the appointment of the consultant(s), the consultant(s) shall recommend to the Measurement Committee the measures to be undertaken and facilities to be installed for verification of amounts of water conserved by the C&A Programs. To the extent such measures and facilities are approved by the Measurement Committee, IID shall implement the measures and construct the facilities in a timely manner to permit an accurate determination, by the end of calendar year 1994, of the quantity of water conserved from each project of the C&A Programs. Such measures and facilities for the verification of amounts of water conserved, and all related expenses, shall be paid by MWD in accordance with the provisions of the Conservation Agreement. Within 18 months from the effective date of the Conservation Agreement, the consultant(s) shall prepare a report(s) on the amount of water estimated to be conserved by the C&A Programs and each project thereof, and shall submit the report(s) to the Measurement Committee. Based on such report(s), the Measurement Committee shall make an estimate of the quantity of water to be conserved by the C&A Programs and each project thereof. Until actual data is available by the end of calendar year 1994 to verify or modify such estimate of water conserved, such estimate shall be used as the amount of the reduction of diversions by IID, and to thus determine the amount of Conserved Water which shall be available for use by MWD pursuant to the Conservation Agreement as augmented and modified by this Approval Agreement. Prior to the determination of the estimate by the Measurement Committee, the amounts shown in Section 3.2 and Appendices A and D of the Conservation Agreement and Exhibit A of this Approval Agreement shall govern. In order to assist in making an accurate determination of the quantity of water conserved from the C&A Programs by the end of calendar year 1994, and provide information to IID to assist it in making any modification or substitution of projects pursuant to Section 4.1 of this Approval Agreement, for each calendar year prior to calendar year 1994 the Measurement Committee shall endeavor to estimate the anticipated quantity of water to be conserved by the C&A Programs upon full implementation of projects, including any modifications or substitutions of projects made

pursuant to the Conservation Agreement and this Approval Agreement. Commencing in calendar year 1994, and in each of the four successive years after 1994, the consultant(s) shall review the then available information and data and make a recommendation to the Measurement Committee on the amounts of water conserved by each individual project and by the C&A Programs. Said determined amount shall, prospectively, constitute the amount of the reduced diversions by IID and the amount of Conserved Water which shall thus be available for use by MWD under the Conservation Agreement as augmented and modified by this Approval Agreement, subject to the limitations on MWD's use contained in the Conservation Agreement and this Approval Agreement. Following these initial five annual reviews, such reviews and reports to the Measurement Committee shall be made by the consultant(s) at five-year intervals for the balance of the term of the Conservation Agreement and at any other times or time requested by a member of the Measurement Committee; provided however, such reviews and reports shall not be made more frequently than once a year. The Measurement Committee shall have the right to decrease, or increase, the amount of water deemed to be conserved from a project of the C&A Programs in the event that an earthquake, binding administrative decision or court order, or other force majeure type events cause the project to function differently than intended, designed, constructed or implemented. The Parties hereto mutually acknowledge that the C&A Programs are intended to conserve 106,110 acre-feet of water annually. In the event a determination is made by the Measurement Committee, or otherwise established pursuant to Section 2.3 of this Approval Agreement, that the total amount of water conserved from the C&A Programs is more than 106,110 acre-feet annually, the additional water, pursuant to the Conservation Agreement and as supplemented by this Approval Agreement, shall be available for MWD's use, subject to the limitations on MWD's use contained in the Conservation Agreement and this Approval Agreement. In the event a determination is made by the Measurement Committee, or otherwise established pursuant to Section 2.3 of this Approval Agreement, that the total amount of water conserved by the Conservation Program is less than 100,000 acre-feet annually, then IID shall proceed, but only at the expense of MWD, to implement additional conservation measures to the Conservation Program in accordance with the terms of the Conservation Agreement. However, in the absence of written approval from MWD to proceed with such additional conservation measures, IID shall not be obligated to construct or implement the additional conservation measures. The water conserved by such additional measures shall be subject to the provisions of the Conservation Agreement and this Approval Agreement. As more specifically set forth in Article IV of this Approval Agreement, within the constraints therein specified, IID has the necessary latitude and flexibility to modify or substitute projects such that the amount of water conserved by the Conservation Program will be between 100,000 and 110,000 acre-feet annually upon full implementation but will not decline."

4. AMENDMENT TO SECTION 3.1

Section 3.1 is replaced with a new Section 3.1 which, as amended, will read as follows:

"Section 3.1: Conditions for Reduction in MWD's Use of Conserved Water. In any calendar year following the Effective Date of the Quantification Settlement

Agreement, MWD will reduce its use of Conserved Water in accordance with the provisions of Section 3.2 of this Approval Agreement, subject to the following condition: CVWD requests MWD, in accordance with this Article III, to reduce its use of Conserved Water.”

5. AMENDMENT TO SECTION 3.2

Section 3.2 is replaced with a new Section 3.2 which, as amended, will read as follows:

“Section 3.2: Reduction in MWD’s Use of Conserved Water. If MWD is required to reduce its use of Conserved Water because the conditions enumerated in Section 3.1 of this Approval Agreement have occurred, MWD will reduce its use of Conserved Water by the amount requested by CVWD, but no more than a maximum of 20,000 acre-feet per calendar year. MWD shall not be relieved of any payment obligations under the Conservation Agreement as modified by this Approval Agreement as a result of a reduction in its use of Conserved Water pursuant to this Section.”

6. AMENDMENT TO SECTION 4.1

On Page 22, the paragraph beginning with the words “(ii) In addition to the....” is deleted in its entirety.

Section 4.1, as amended, will read as follows:

“Section 4.1: In consideration of the mutual obligations and undertakings set forth herein including settlement of the pending litigation:

(i) IID will delete Project Number 1 (Trifolium Reservoir), Project Number 2 (South Alamo Canal Lining, Phase I), and Project Number 13 (Tailwater Assessment) from the Appendices of the Conservation Agreement and substitute in their place the projects listed on Exhibit A attached hereto. Furthermore, IID shall reduce its annual diversions from the Colorado River below that which it would otherwise have been absent Project Number 1 and Project Number 2 (in an amount equal to the quantity of water conserved by these two projects, defined as the Augmentation Program, and estimated to be 6,110 acre-feet annually) so that the water from the Augmentation Program shall be available for MWD’s use, subject to the limitations on MWD’s use contained in the Conservation Agreement and this Approval Agreement. The amount of water conserved by these two projects will be determined by the Measurement Committee in accordance with Section 2.2 of this Approval Agreement. If the estimate is less than the Measurement Committee determines has been conserved, the additional water shall be available for use by MWD under the Conservation Agreement and this Approval Agreement, subject to the limitations on MWD’s use contained in the Conservation Agreement and this Approval Agreement. If the estimate is more than the Measurement Committee establishes, there shall be no obligation on the part of IID, either at its own expense or at the expense of MWD, to provide the additional water. IID shall construct, operate, maintain, and replace such projects in the same manner as it

would have constructed, operated, maintained, and replaced these projects had the projects remained an integral part of the Conservation Program and been paid for by MWD, and recognizing that 6,110 acre-feet annually was estimated to be conserved by the projects. IID shall pay the capital and annual direct costs of Project Number 1 and Project Number 2. Except for the provisions relating to the payment by MWD of the capital and annual direct costs for Projects 1 and 2, all other provisions set forth in the Conservation Agreement and this Approval Agreement shall be applicable to, and be binding upon, MWD and IID with respect to the use of water conserved by these two projects. All terms and conditions of the Conservation Agreement relating to Project Number 13 (Tailwater Assessment) shall be deleted, and such terms and conditions shall be applied to the substituted projects set forth in Exhibit A.”

7. AMENDMENT TO SECTION 7.1

Section 7.1 will be deleted in its entirety.

8. AMENDMENT TO SECTION 8.1

Section 8.1 will be deleted in its entirety and replaced with a new Section 8.1 which, as amended, will read as follows:

“The Parties do not intend to, and under the Agreement do not in any way, transfer, assign, encumber or grant to each other any ownership interest in or control over any of each other’s water rights, nor do they intend in any way to define, modify or agree on the proper use, purposes, or limits of each other’s water rights.”

9. AMENDMENT TO SECTION 9.1

Section 9.1 will be deleted in its entirety and replaced with a new Section 9.1 which, as amended, will read as follows:

“Section 9.1: Subject to the terms and conditions of this Approval Agreement, PVID agrees not to divert, pump, use or demand the Conserved Water (as defined in Recital E). This PVID expressly agrees to do in order to permit such water to be made available to MWD in accordance with the Parties’ water delivery contracts with the United States.

“Subject to the terms and conditions of this Approval Agreement and except as provided herein, CVWD agrees not to divert, pump, use or demand the Conserved Water (as defined in Recital E). This CVWD expressly agrees to do in order to permit such water to be made available to MWD in accordance with the Parties’ water delivery contracts with the United States.”

10. AMENDMENT TO SECTION 11.1

Section 11.1, Page 26, second line after the phrase "Approval Agreement", insert "as amended", and after the phrase "Conservation Agreement", insert "as amended".

Section 11.1, Page 27, third line after the phrase "Approval Agreement", insert "as amended".

Section 11.1, Page 27, fifth line after the phrase "Conservation Agreement", insert "as amended" and after the phrase "Approval Agreement", insert "as amended".

Section 11.1, as amended, will read as follows:

"Section 11.1: Except as expressly provided for in this Approval Agreement as amended, the Conservation Agreement as amended shall govern the relationship between IID and MWD. With regard to the relationship among IID, MWD, CVWD, and PVID, to the extent the terms and conditions of this Approval Agreement as amended conflict with, modify or alter the terms and conditions contained in the Conservation Agreement as amended, this Approval Agreement as amended shall govern.

11. AMENDMENT TO EXHIBITS B AND C

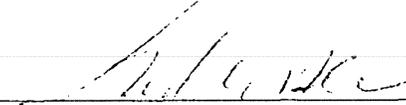
Exhibits B and C are deleted in their entirety.

12. AGREEMENT TO GOVERN. This Amendment shall be interpreted in a manner consistent with, and in furtherance of the objectives of, the Quantification Settlement Agreement and the related Acquisition Agreements. Except as expressly amended by this Amendment to the Approval Agreement, the Approval Agreement's mutual obligations and undertakings shall remain in full force and effect.

13. THE AMENDMENTS CONTEMPLATED BY THIS AMENDMENT TO THE APPROVAL AGREEMENT will take effect upon the Effective Date as defined in the Quantification Settlement Agreement.

14. TERMINATION. The amendments made by this Amendment to the Approval Agreement will terminate and be of no force or effect upon the termination of the Quantification Settlement Agreement.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment to the Approval Agreement on the day and year first above written.

By: 
President
Imperial Irrigation District

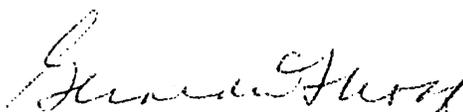
APPROVED AS TO FORM:

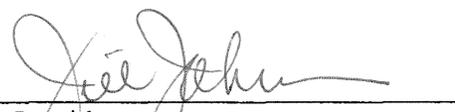
By: 
Chief Counsel
Imperial Irrigation District

By: 
Chief Executive Officer
The Metropolitan Water District of
Southern California

By: 
General Counsel
The Metropolitan Water District of
Southern California

By: 
General Manager-Chief Engineer
Coachella Valley Water District

By: 
General Counsel
Coachella Valley Water District

By: 
President
Palo Verde Irrigation District

By: 
General Counsel
Palo Verde Irrigation District

ALLOCATION AGREEMENT
AMONG
THE UNITED STATES OF AMERICA,
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA,
COACHELLA VALLEY WATER DISTRICT,
IMPERIAL IRRIGATION DISTRICT,
SAN DIEGO COUNTY WATER AUTHORITY,
THE LA JOLLA, PALA, PAUMA, RINCON AND SAN PASQUAL
BANDS OF MISSION INDIANS,
THE SAN LUIS REY RIVER INDIAN WATER AUTHORITY,
THE CITY OF ESCONDIDO AND VISTA IRRIGATION DISTRICT

ARTICLE I

Parties and Authority

THIS ALLOCATION AGREEMENT AMONG THE UNITED STATES OF AMERICA, THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, COACHELLA VALLEY WATER DISTRICT, IMPERIAL IRRIGATION DISTRICT, THE SAN DIEGO COUNTY WATER AUTHORITY, THE LA JOLLA, PALA, PAUMA, RINCON AND SAN PASQUAL BANDS OF MISSION INDIANS, THE SAN LUIS REY RIVER INDIAN WATER AUTHORITY, THE CITY OF ESCONDIDO AND VISTA IRRIGATION DISTRICT (“Allocation Agreement”), signed this 10th day of October, 2003, pursuant to the Act of Congress approved June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Federal Reclamation Law, including the Act of Congress approved December 21, 1928 (45 Stat. 1057), referred to as the Boulder Canyon Project Act, pursuant to the Act of Congress approved November 17, 1988 as amended (“Public Law 100-675”), and among the United States of America (“United States”) both in its own right and on behalf of the La Jolla, Pala, Pauma, Rincon

and San Pasqual Bands of Mission Indians and the San Luis Rey River Indian Water Authority as trustee, acting by and through its Secretary of the Interior (“Secretary”), The Metropolitan Water District of Southern California (“MWD”), the Coachella Valley Water District (“CVWD”), the Imperial Irrigation District (“IID”), the San Diego County Water Authority (“SDCWA”), the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians (collectively, the “Indian Bands”), the San Luis Rey River Indian Water Authority (“Indian Water Authority”), the City of Escondido (“Escondido”), and Vista Irrigation District (“Vista”), each of which is at times referred to individually as “Party” and which are at times collectively referred to as “Parties.”

WITNESSETH THAT:

ARTICLE 2

Explanatory Recitals

2.1 WHEREAS, the United States has constructed the All-American Canal and its Coachella Branch (“Coachella Canal”) in accordance with the Boulder Canyon Project Act; and

2.2 WHEREAS, the Secretary, pursuant to Title II of Public Law 100-675 (“Title II”), is authorized to construct a new lined canal or to line the previously unlined portions of the All-American Canal from the vicinity of Pilot Knob to Drop 4 and the Coachella Canal from Siphon 7 to Siphon 32, or to construct seepage recovery facilities in the vicinity of Pilot Knob to Drop 4, including measures to protect public safety; and

2.3 WHEREAS, Title II provides that the Secretary shall determine the quantity of water conserved by the works constructed under Title II and may revise such determination at reasonable intervals based on such information as the Secretary deems

appropriate and further provides that the determinations shall be made in consultation with Palo Verde Irrigation District (“PVID”), IID, CVWD and MWD; and

2.4 WHEREAS, litigation is pending in the United States District Court for the Southern District of California to determine the rights of the Indian Bands, Escondido and Vista to the water in the San Luis Rey River, related proceedings are pending before the Federal Energy Regulatory Commission and on November 17, 1988, the President of the United States approved Title I of Public Law 100-675, to provide for the settlement of the reserved water rights claims of the Indian Bands; and

2.5 WHEREAS, no federal funds are authorized to be appropriated for the Title II work described in Section 2.2 herein; and

2.6 WHEREAS, the California Water Code Section 12560 et seq. provides for two hundred million dollars (\$200,000,000) to be continuously appropriated from the General Fund to a Colorado River Management Account to be used by the Director of the California Department of Water Resources (“DWR”) to finance and arrange for lining portions of the All-American Canal and the Coachella Canal; and

2.7 WHEREAS, the Parties intend that the State funds appropriated pursuant to California Water Code Sections 12560 et seq. be used to pay all reasonable and necessary costs for work directly associated with the Projects occurring after September 24, 1998 and approved by DWR (“Eligible Project Costs”) in an amount not to exceed in aggregate two hundred million dollars (\$200,000,000) and in accordance with the terms and conditions of the All-American Canal Lining Project Funding Agreement (“AAC Funding Agreement”) and the Coachella Canal Lining Project Funding Agreement (“CC Funding Agreement”), respectively; and

2.8 WHEREAS, Section 12562(b) of the California Water Code provides for the use by the Director of DWR of thirty-five million dollars (\$35,000,000) to finance the installation of recharge, extraction, and distribution facilities for groundwater conjunctive use programs necessary to implement the "California Plan," and it is the intention of the Parties to make available for use by SDCWA for conjunctive use projects within its boundaries those funds to the extent unexpended as of the Effective Date; and

2.9 WHEREAS, Section 79567 of the California Water Code identifies the sum of twenty million dollars (\$20,000,000) as available for appropriation by the California Legislature from the Water Security, Clean Drinking Water, Coastal and Beach Protection Fund of 2002 to DWR for grants for canal lining and related projects necessary to reduce Colorado River water use, and it is the intention of the Parties that those funds be available for use by SDCWA, IID or CVWD for the All-American Canal and Coachella Canal Lining Projects; and

2.10 WHEREAS, Title I of Public Law 100-675 ("Title I") as amended on October 27, 2000 provides that the Secretary, acting through the Commissioner of Reclamation, shall permanently furnish annually 16,000 acre-feet of the water conserved by the works authorized in Title II, for the benefit of the Indian Bands and Escondido and Vista in accordance with the San Luis Rey River Indian Water Rights Settlement Agreement ("Settlement Agreement"); provided that during construction of said works, the Indian Water Authority, a permanent intertribal entity established by the Bands, Escondido and Vista, shall receive 17 percent of any water conserved by said works up to a maximum of 16,000 acre-feet per Calendar Year; and

2.11 WHEREAS, Title II provides for the quantity of water conserved from the canal linings to be made available for consumptive use by California Contractors within their service areas according to their priorities under the Seven Party Agreement; and

2.12 WHEREAS, it was the original intention of the Parties to allocate a portion of the water conserved from the canal linings to MWD, but MWD now desires to assign all of its rights, interest and duties with respect to and in such conserved water to SDCWA, with the exception of water to be allocated pursuant to Section 7.6 herein, and SDCWA desires to accept such assignment of rights, interest and duties from MWD; and

2.13 WHEREAS, although MWD, IID and CVWD are not parties to the pending litigation and the related proceeding before the Federal Energy Regulatory Commission referenced in Section 2.4 herein, MWD, IID and CVWD are willing to facilitate implementation of the settlement of the dispute under the terms of this Allocation Agreement; and

2.14 WHEREAS, the Parties desire to enter into this Allocation Agreement to provide for the allocation of an amount of Colorado River water equal to the amount conserved from the Title II works; and

2.15 WHEREAS, the United States holds title to the All-American Canal and the Coachella Canal, and IID operates and maintains the All-American Canal pursuant to Contract No. I1r-747 with the United States dated December 1, 1932 and the Amendatory and Supplemental Contract with the United States dated March 4, 1952, and CVWD operates and maintains the Coachella Canal pursuant to Contract No. I1r-781 with the United States dated October 15, 1934, a system of protective works designed to protect the Coachella Canal pursuant to Supplemental Contract No. I1r-781 with the United

States dated December 22, 1947, and a concrete-lined Coachella Canal and structures from Station 2 plus 26 to the beginning of Siphon 7 pursuant to Amendatory Contract No. 7-07-30-W0007 with the United States dated March 14, 1978; and

2.16 WHEREAS, Section 12562(a)(2) of the California Water Code has been amended by Chapter 13 of Stats.2003 to require that the Projects be completed not later than December 31, 2008, or such later date as may be required by extraordinary circumstances.

NOW THEREFORE, in consideration of the promises and mutual covenants and agreements herein contained, the Parties agree:

ARTICLE 3

Definitions and Word Usage

3.1 "AAC Committee" shall mean the All-American Canal Lining Project Operations, Maintenance, and Repair Coordinating Committee.

3.2 "All-American Canal" shall mean the canal through which water is conveyed from the Imperial Dam and Desilting Works to the Westside Main Canal.

3.3 "All-American Canal Lining Project" shall mean a portion of the work authorized in Title II which will result in a lined All-American Canal from one mile west of Pilot Knob to Drop 3, a distance of approximately 23 miles.

3.4 "Calendar Year" shall mean the 12-month period running from January 1 through December 31.

3.5 "Calendar Years" shall mean more than one Calendar Year.

3.6 "California Contractor" shall mean one of the California Contractors.

3.7 "California Contractors" shall mean CVWD, IID, MWD and PVID.

3.8 “Capital Cost Payment(s)” shall mean the payments described in Exhibit B.

3.9 “CC Committee” shall mean the Coachella Canal Lining Project Operations, Maintenance, and Repair Coordinating Committee.

3.10 “Coachella Canal” shall mean the Coachella Branch of the All-American Canal, through which water is conveyed from Drop 1 of the All-American Canal to Lake Cahuilla.

3.11 “Coachella Canal Lining Project” shall mean a portion of the work authorized in Title II which will result in a lined Coachella Canal from Siphons 7 to 14 and from Siphons 15 to 32, a distance of 33.2 miles.

3.12 “Colorado River Management Account” shall mean the account created pursuant to California Water Code Section 12561.

3.13 “Commissioner” shall mean the Commissioner of Reclamation.

3.14 “Committee” shall mean the “AAC Committee” for the All-American Canal Lining Project or the “CC Committee” for the Coachella Canal Lining Project.

3.15 “Costs” shall mean the combined total of: (a) Net Additional Operation, Maintenance and Repair Costs; and (b) Mitigation Costs associated with the Environmental Commitment Plan.

3.16 “Criteria for Coordinated Long-range Operation of Colorado River Reservoirs” shall mean the document transmitted by the Secretary on June 8, 1970 to the Governors of the Colorado River Basin States pursuant to the Colorado River Basin Project Act of September 30, 1968, as it may be amended from time to time.

3.17 “Cumulative Shortage Losses” shall mean the sum of: (a) the cumulative difference between the total volume of water allocated to MWD and SDCWA and 93,700 acre-feet in each of those Shortage Years that the conditions precedent to the allocation of water to the San Luis Rey Settlement Parties have not been met; or (b) the cumulative difference between the total volume of water allocated to SDCWA and 77,700 acre-feet in each of those Shortage Years that an allocation is being made to the San Luis Rey Settlement Parties as applicable.

3.18 “CVWD” shall mean the Coachella Valley Water District, a public agency of the State organized and existing under the County Water District Act of the State and acts amendatory thereof or supplementary thereto.

3.19 “Due Day” shall mean January 16th of each Calendar Year of this Allocation Agreement, or if January 16th falls on a Saturday, Sunday or a State legal holiday, the next succeeding business day.

3.20 “DWR” shall mean the California Department of Water Resources.

3.21 “Effective Date” shall mean the date on which the United States District Court for the Southern District of California executes the Stipulation and Order dismissing the case IID v. United States, et al., Case No. 03cv0069w (JFS).

3.22 “Effects on MWD” shall mean: (1) a reduction in the amount of surplus water otherwise allocated or available to MWD for any and all purposes; or (2) a reduction in MWD's net diversions of surplus water through the All-American Canal or Coachella Canal that MWD has a right to make; any of which could result from IID's election to utilize water made available for allocation as a result of the Projects which would otherwise be made available to MWD.

3.23 “Environmental Commitment Plan” shall mean for the All-American Canal Lining Project, Reclamation’s plan dated July 8, 2003, as amended from time to time upon agreement of the responsible parties, that implements the All-American Canal Lining Project’s Mitigation; and for the Coachella Canal Lining Project, Reclamation’s plan dated March 4, 2003, as amended from time to time upon agreement of the responsible parties, that implements the Coachella Canal Lining Project’s Mitigation.

3.24 “Escondido” shall mean the City of Escondido, a general law city organized and existing under the laws of the State.

3.25 “Exhibit A” shall mean Exhibit A to this Allocation Agreement, entitled Amount of Water Conserved by Lining Each of the Reaches of the All-American Canal and Coachella Canal.

3.26 “Exhibit B” shall mean Exhibit B to this Allocation Agreement, entitled Capital Cost Payments.

3.27 “Extension Year” shall mean one of the Extension Years.

3.28 “Extension Years” shall mean those Calendar Years required to fully replace for SDCWA all Cumulative Shortage Losses as provided in Section 5.6 of this Allocation Agreement and all IID Call Water as provided in Section 9.5.1 and 9.6.4 of this Allocation Agreement.

3.29 “IID” shall mean the Imperial Irrigation District, a public agency of the State organized and existing under the Irrigation District Act of the State.

3.30 “IID Call Water” shall mean the total volume of water allocated to IID pursuant to the exercise of its call rights under this Allocation Agreement.

3.31 "Indian Bands" shall mean the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians.

3.32 "Indian Water Authority" shall mean the San Luis Rey River Indian Water Authority, a permanent intertribal entity recognized and approved by Public Law 100-675.

3.33 "Interim Surplus Guidelines" shall mean the guidelines implemented by the Secretary of the Interior under which surplus water conditions are determined in the Lower Colorado River Basin through 2016 following a January 16, 2001 Record of Decision.

3.34 "Lower Colorado Regional Director" shall mean the Regional Director of Reclamation's Lower Colorado Regional Office or his or her duly authorized successor.

3.35 "Mitigation" shall mean the measures to be implemented as described in the Environmental Commitment Plan for the Project.

3.36 "Mitigation Costs" shall mean the costs specified in Section 13.3 of this Allocation Agreement associated with implementing the Mitigation for the Project.

3.37 "MWD" shall mean The Metropolitan Water District of Southern California, a public agency of the State organized and existing under the Metropolitan Water District Act of the State.

3.38 "Net Additional Operation, Maintenance and Repair (OM&R) Costs shall mean the costs specified in Section 13.2 of this Allocation Agreement.

3.39 "Notice of Default" shall mean a document informing a Party of an amount past due, containing sufficient information to permit the Party to pay the amount due to the Party owed the amount due.

3.40 “Parties” shall mean the United States, MWD, CVWD, IID, SDCWA, the Indian Bands, the Indian Water Authority, Escondido and Vista.

3.41 “Party” shall mean one of the Parties.

3.42 “Projects” shall mean the All-American Canal Lining Project and the Coachella Canal Lining Project and, in its singular form, “Project,” shall mean either of said Projects, or both, as the context shall require.

3.43 “Public Law 100-675” shall mean 102 Stat. 4000 through 4011, as amended by Section 117 of Public Law 102-154, 105 Stat. 1012 through 1013, Public Law 105-256, 112 Stat. 1896, 1899 and Section 211 of Public Law 106-377--Appendix B, 114 Stat. 1441A-70 through 71.

3.44 “PVID” shall mean the Palo Verde Irrigation District, a public agency of the State organized and existing under the Palo Verde Irrigation District Act of the State.

3.45 “Quantification Settlement Agreement” shall mean that agreement of the same name among IID, CVWD, and MWD.

3.46 “Reclamation” shall mean the Bureau of Reclamation, a bureau of the United States Department of the Interior.

3.47 “SDCWA” shall mean the San Diego County Water Authority, a public agency of the State organized and existing under the County Water Authority Act.

3.48 “San Luis Rey Settlement Parties” shall mean Escondido, Vista, the Indian Bands, and the Indian Water Authority.

3.49 “Secretary” shall mean the Secretary of the Interior or her or his duly authorized representative or successor.

3.50 “Section 4” shall mean the section of the All-American Canal from Pilot Knob to immediately upstream of Drop 1.

3.51 “Section 5” shall mean the section of the All-American Canal from Drop 1 to the East Highline Check.

3.52 “Settlement Agreement” shall mean the agreement among the United States, Escondido, Vista, and the Indian Bands referenced in Title I providing for the complete resolution of all claims, controversies, and issues involved in all of the pending proceedings among the parties in the United States District Court for the Southern District of California and the Federal Energy Regulatory Commission.

3.53 “Shortage Year” shall mean a Calendar Year or a portion of a Calendar Year following completion of the Projects for which the Secretary determines under the Criteria for Coordinated Long-range Operation of Colorado River Reservoirs that a shortage condition exists and reduces the amount of water conveyed through the All American or Coachella Canals due to the availability of less than 4.4 million acre-feet to California in that Calendar Year.

3.54 “Shortage Years” shall mean more than one Shortage Year.

3.55 “State” shall mean the State of California.

3.56 “Title I” shall mean Title I of Public Law 100-675.

3.57 “Title II” shall mean Title II of Public Law 100-675.

3.58 “Uncontrollable Force” shall mean any cause beyond the control of the Party affected, excluding a shortage determined by the Secretary in accordance with the Secretary’s Criteria for Coordinated Long-range Operation of Colorado River Reservoirs, and shall include, but is not limited to, facilities failure, flood, earthquake, storm,

lightning, fire, epidemic, war, riot, civil disturbance, labor disturbance, sabotage, restraint by court or public authority or other events which by exercise of due diligence and foresight such Party could not have been reasonably expected to avoid.

3.59 “United States” shall mean the United States of America.

3.60 “Vista” shall mean the Vista Irrigation District, a public agency of the State organized and existing under the Irrigation District Act of the State.

3.61 “Year ___” (e.g. Year 45) shall mean one in the series of Calendar Years occurring after the Effective Date of this Allocation Agreement with Year 1 being the first full or partial Calendar Year after the Effective Date.

3.62 Word Usage and Rules of Construction. Unless the context clearly requires otherwise:

3.62.1 The plural and singular numbers include the other;

3.62.2 The masculine, feminine, and neuter genders include the others;

3.62.3 “Shall,” “will,” and “must,” are each mandatory;

3.62.4 “May” is permissive;

3.62.5 “May not” is prohibitory;

3.62.6 “Or” is not exclusive;

3.62.7 “Includes” and “including” are not limiting;

3.62.8 “Between” includes the ends of the identified range; and

3.62.9 “Person” includes any natural person or legal entity; and

3.62.10 The Exhibits attached to this Allocation Agreement are incorporated by reference and are a part of this Allocation Agreement to the same extent as the Articles.

ARTICLE 4

Term

4.1 Term. This Allocation Agreement shall become effective on the Effective Date if it has been executed by the United States, MWD, CVWD, IID and SDCWA by that date, notwithstanding the fact that any of the other Parties has not executed this Allocation Agreement. In the event that any of the Parties other than the United States, MWD, CVWD, IID and SDCWA have not executed this Allocation Agreement by the Effective Date, this Allocation Agreement shall be binding on those Parties who have executed the Allocation Agreement. Any Party who executes this Allocation Agreement following the Effective Date shall be entitled to all rights and bound by all obligations under this Allocation Agreement thereafter. No Party shall take a position in any administrative, judicial or legislative forum contrary to or inconsistent with this Section 4.1.

4.2 Termination. The initial term of this Allocation Agreement shall be 55 Calendar Years in accordance with the provisions of Title II. The Parties hereby consent to renewal of the term for an additional 55 Calendar Years. Said renewal shall be automatic and shall not require any action by any party. The term shall be further extended for the number of Calendar Years required to fully deliver to SDCWA all Cumulative Shortage Losses as provided in Section 5.6 of this Allocation Agreement and all IID Call Water as provided in Section 9.5.1 and 9.6.4 of this Allocation Agreement. Said extension shall be automatic and shall not require any action by any party. At such time as this Allocation Agreement terminates, Article 7 of this Allocation Agreement and

all other provisions of this Allocation Agreement necessary to effectuate Article 7 shall remain in full force and effect and shall never terminate.

ARTICLE 4A

Assignment of MWD's Rights and Duties to SDCWA

4A.1 Assignment of Rights and Duties by MWD. In consideration of the promises and agreements contained in the Colorado River Water Delivery Agreement between the United States, IID, CVWD, MWD, and SDCWA, and SDCWA's agreement to assume all of MWD's obligations under this Allocation Agreement, MWD hereby assigns to SDCWA all of MWD's rights and interest in delivery of 77,700 acre-feet of Colorado River water previously intended to be delivered to MWD under Article 10 and Section 5.6 of this Allocation Agreement, as set forth in Section 2.12 of this Allocation Agreement. In addition, MWD assigns to SDCWA its right to receive reimbursement or payments with respect to the All-American Canal Lining Project and the Coachella Canal Lining Project under applicable federal and state law, including subsections (a) and (b) of California Water Code Section 12562, as amended, and agrees to make reasonable efforts to support appropriation to SDCWA of the funding referenced in Sections 2.8 and 2.9 herein. MWD agrees that it shall cooperate in and take any further actions necessary to accomplish the assignment of rights and interest made under this Article 4A and shall take no action which interferes with the delivery of water to SDCWA under this Allocation Agreement.

4A.2 Acceptance of Assignment of Rights and Duties by SDCWA. SDCWA hereby accepts the assignment of rights and duties from MWD as set forth in Section 4A.1. SDCWA agrees that it shall cooperate in and take any further actions necessary to

accomplish the assignment of obligations made under this Article 4A and shall not assert that MWD has continuing obligations under this Allocation Agreement, except as provided in Section 4A.3.

4A.3 Water Allocated to the San Luis Rey Settlement Parties. Nothing in this Allocation Agreement shall be construed as an assignment of rights or duties from MWD to SDCWA with respect to water made available under Article 7 of this Allocation Agreement.

4A.4 Delivery of Water to SDCWA. SDCWA shall take delivery of water under this Allocation Agreement pursuant to the Colorado River Water Delivery Agreement and the Amended and Restated Agreement Between the MWD and the SDCWA for the Exchange of Water dated as of October 9, 2003, or otherwise.

4A.5 Acknowledgement by All Parties. All Parties to this Allocation Agreement acknowledge that the assignment of rights, interest and duties contained in this Article have occurred, do not object to the assignment thereof because such assignment is not to affect any Party's rights, interests and duties under this Agreement other than MWD and SDCWA, and covenant that they will not interfere with delivery of water to SDCWA hereunder or claim that MWD has continuing obligations under this Allocation Agreement, except as provided in Section 4A.3.

ARTICLE 5

Quantity of Water Available for Allocation

5.1 Secretarial Determinations During the Term of the Quantification Settlement Agreement. During the term of the Quantification Settlement Agreement, the

Secretary shall determine the quantity of water available for allocation as a result of the Projects in accordance with Sections 5.2 through 5.6 herein.

5.2 Reach by Reach Construction. The Secretary will determine the completion of the lining of each canal reach during the construction of the Projects. The Secretary will determine the amount of Colorado River water available for allocation as a result of lining each canal reach, in accordance with Exhibit A, which sets forth the amount of water which will be conserved by each reach in accordance with the Final Environmental Impact Statement/ Environmental Impact Report for each Project. The Secretary will send a notice of reach completion for each canal reach to the Parties as each such reach is completed and will include in the notice the Secretary's determination as to the amount of water available for allocation as a result of lining that reach.

5.3 Project Completion. The Secretary will determine the completion of construction of the All-American Canal Lining Project and the Coachella Canal Lining Project. The Secretary will send a notice of completion of construction to the Parties as each such Project is completed. In accordance with the All-American Canal Lining Project Final Environmental Impact Statement/Environmental Impact Report, the Secretary has determined that 67,700 acre-feet of Colorado River water is available per Calendar Year for allocation upon completion of construction of the All-American Canal Lining Project, if the Project as completed consists of a parallel canal from one mile west of Pilot Knob to Drop 3 connected to the existing canal immediately upstream and downstream from the existing drop structures and interstate highway bridges. In accordance with the Coachella Canal Lining Project Final Environmental Impact Statement/Environmental Impact Report, the Secretary has determined that 26,000 acre-

feet of Colorado River water is available per Calendar Year for allocation upon completion of construction of the Coachella Canal Lining Project, if the Project as completed lines the canal from Siphon 7 to Siphon 14 and from Siphon 15 to Siphon 32. Should a determination be made to construct a parallel canal and new siphons from Siphon 7 to Siphon 32 and should canal diversions not supply marsh/aquatic and desert riparian habitat, the Secretary will determine the amount of water available for allocation upon completion of construction of the Coachella Canal Lining Project. The Parties recognize that such determination could result in a value greater or less than 26,000 acre-feet per Calendar Year.

5.4 Deemed Completion. If for any reason work on the All-American Canal Lining Project is terminated prior to lining the All-American Canal or construction of a new concrete-lined canal from one mile west of Pilot Knob to Drop 3, the Secretary, after consultation with the Parties, shall deem the Project to be complete and will determine the amount of Colorado River water available for allocation from that Project. If for any reason work on the Coachella Canal Lining Project is terminated prior to lining the Coachella Canal or construction of a new concrete lined canal from Siphon 7 to Siphon 14 and from Siphon 15 to Siphon 32, the Secretary shall, after consultation with the Parties, deem the Project to be complete and will determine the amount of water available for allocation from that Project. The Secretary will make each such determination after consultation with the Parties and in accordance with Exhibit A. The Secretary will notify the Parties of any such determination in the notice of completion of construction for each Project and the Project will then be deemed complete.

5.5 Uncontrollable Forces. The amount of water available to be allocated from each of the Projects may be reduced temporarily or permanently as a result of Uncontrollable Forces. In the event of an Uncontrollable Force occurring after the Secretary has issued notice(s) of reach completion or notice(s) of completion or of construction of either or both Projects, the Secretary shall determine, in consultation with the Parties, whether and to what extent the amount of water made available for allocation as a result of the Projects is thereby reduced. If the reduction is temporary, the Secretary shall also provide notice of the amount of water made available for allocation as a result of the Projects as conditions change. The Secretary shall provide notice of such determinations to all Parties.

5.6 Shortage Years. In any Calendar Year after the Secretary has issued notices of completion of construction for the Projects and in which the Secretary determines a Shortage Year exists, the Secretary shall determine, in consultation with the Parties, whether and to what extent the amount of water to be made available for allocation as a result of the Projects is thereby reduced. The Secretary shall provide notice of any such determination to all Parties. Should the amount of water to be made available for allocation as a result of the Projects be less than 93,700 acre-feet per Calendar Year, the term of this Allocation Agreement regarding the allocation of water to SDCWA shall be extended for the number of Calendar Years necessary to deliver to SDCWA an amount of water equal to the Cumulative Shortage Losses. In each particular Extension Year, the Secretary shall deliver to SDCWA 77,700 acre-feet or such lesser amount as will fully replace the remainder of the Cumulative Shortage Losses. Subject only to the determination by the Secretary of a shortage in any Extension Year, the

Secretary shall deliver such water annually until the Cumulative Shortage Losses have been fully satisfied.

5.7 Secretarial Determinations Following the Termination of the Quantification Settlement Agreement. Following the termination of the Quantification Settlement Agreement, the Secretary shall determine the quantity of water available for allocation as a result of the Projects in accordance with Title II, or as otherwise agreed upon by the Parties.

ARTICLE 6

Completion of Work

6.1 All-American Canal Lining Project. IID and CVWD agree not to place any additional limitations or conditions on either SDCWA or the Secretary relative to the Projects other than the conditions and limitations specified in this Allocation Agreement. The Projects shall be completed as soon as possible but not later than the deadline set forth in California Water Code Section 12562(a), as amended. The Parties agree that SDCWA shall replace MWD as a voting member of the All-American Canal Lining Committee, as created by and with responsibilities as set forth in the Advance Funding Agreement Among Reclamation, IID and MWD to Provide Funds to Initiate Preliminary Work Necessary for the All-American Canal Lining Project, dated November 12, 2002. IID may assign construction contracts, including Contract Number 4600002001, to SDCWA. Should the State terminate the October 1, 2001 Standard Agreement between IID and the Department of Water Resources (Contract Number 4600002001) because IID failed to perform the covenants therein contained at the time and manner therein provided, IID, CVWD and MWD shall not object to the State proceeding with the work

through an agreement between SDCWA or any other Party and DWR nor in any way hinder or obstruct such work. Reimbursement of All-American Canal obligations shall be made to IID by SDCWA through the Colorado River Management Account in the same manner and form as stated in Section 5.2 of the Agreement Relating to the Construction of a Concrete Lined Canal Parallel to the Existing All-American Canal between IID and MWD dated February 3, 1995. Nothing in this article shall affect or waive any right of CVWD to object to project plans or designs that would interfere with delivery of water to CVWD pursuant to contracts between the United States and CVWD.

6.2 Coachella Canal Lining Project. The June 1, 2001 Standard Agreement between MWD and DWR (Contract Number 4600001474) shall be assigned to CVWD or SDCWA, and MWD shall have no rights or obligations pursuant to the Standard Agreement. Should the State terminate Contract Number 4600001474 because either CVWD or SDCWA fail to perform the covenants therein contained at the time and manner therein provided, MWD shall not object to the State proceeding with the work through an agreement between one of the other Parties and DWR nor in any way hinder or obstruct such work.

ARTICLE 7

Allocation of Water to San Luis Rey Settlement Parties

7.1 Obligation to Deliver Water. The Secretary shall deliver Colorado River water available for allocation as a result of the Projects each Calendar Year for the benefit of the San Luis Rey Settlement Parties in accordance with the provisions of this Article 7 and Section 106(c) of Title I.

7.2 Conditions on Delivery of Water. The Secretary's obligation to deliver water to the San Luis Rey Settlement Parties shall be conditioned upon the occurrence of each of the following:

7.2.1 The United States, Escondido, Vista, and the Indian Bands have entered into a Settlement Agreement providing for the complete resolution of all claims, controversies, and issues involved in all of the pending proceedings among the parties in the United States District Court for the Southern District of California and the Federal Energy Regulatory Commission; and

7.2.2 Stipulated judgments or other appropriate final dispositions have been entered in said proceedings; and

7.2.3 The Secretary has determined the availability of water for allocation in accordance with Article 5 of this Allocation Agreement; and

7.2.4 The San Luis Rey Settlement Parties have advanced funds to pay their proportionate share of Costs for that Calendar Year, as determined and required under Articles 13 and 15 of this Allocation Agreement.

7.3 Point of Delivery. The Secretary shall deliver any water available for the benefit of the San Luis Rey Settlement Parties under this Article 7 to a point or points of delivery along the Colorado River from Lake Havasu to Imperial Dam or, subject to the approval of the Secretary and subject to any additional environmental compliance and applicable federal law, elsewhere along the Colorado River.

7.4 Quantification Settlement Agreement. During the term of the Quantification Settlement Agreement, the Secretary shall deliver water for the benefit of the San Luis Rey Settlement Parties in accordance with Sections 7.4.1 and 7.4.2 herein

and shall account for such deliveries from Priority 3(a) of the priorities set forth in the existing Colorado River water delivery contracts with the Secretary:

7.4.1 Water Resulting from All-American Canal Lining Project. The Secretary shall deliver water available for allocation as a result of the All-American Canal Lining Project for the benefit of the San Luis Rey Settlement Parties as follows:

(a) During construction, the Secretary shall deliver for the benefit of the San Luis Rey Settlement Parties 17 percent of the water determined by the Secretary under Article 5 of this Allocation Agreement to be available for allocation as a result of the All-American Canal Lining Project, up to:

(i) 11,500 acre-feet of water per Calendar Year until such time as the Secretary notifies the Parties of the completion of construction of the Coachella Canal Lining Project; or

(ii) 16,000 acre-feet of water per Calendar Year, in the event and to the extent that a full 4,500 acre-feet of water is not available for allocation from the completed Coachella Canal Lining Project in a Calendar Year.

(b) After the Secretary notifies the Parties of the completion of construction of the All-American Canal Lining Project, the Secretary shall deliver for the benefit of the San Luis Rey Settlement Parties water determined by the Secretary under Article 5 of this Allocation Agreement to be available for allocation as a result of the All-American Canal Lining Project, up to 11,500 acre-feet of water per Calendar Year. After completion of the Coachella Canal Lining Project, the delivery amount from the All-American Canal Lining Project after completion of construction shall be increased, not to exceed a total of 16,000 acre-feet of water per Calendar Year, in the event and to the

extent a full 4,500 acre-feet of water is not available for allocation from the Coachella Canal Lining Project for delivery for the benefit of the San Luis Rey Settlement Parties in that Calendar Year on an acre-foot per acre-foot basis to the extent such water is determined by the Secretary under Article 5 of this Allocation Agreement to be available for allocation as a result of the All-American Canal Lining Project.

7.4.2 Water Resulting from Coachella Canal Lining Project. The Secretary shall deliver water available for allocation as a result of the Coachella Canal Lining Project for the benefit of the San Luis Rey Settlement Parties as follows:

(a) During construction, the Secretary shall deliver for the benefit of the San Luis Rey Settlement Parties 17 percent of the water determined by the Secretary under Article 5 of this Allocation Agreement to be available for allocation as a result of the Coachella Canal Lining Project, up to:

(i) 4,500 acre-feet of water per Calendar Year until such time as the Secretary notifies the Parties of the completion of construction of the All-American Canal Lining Project, or

(ii) 16,000 acre-feet of water per Calendar Year, in the event and to the extent that a full 11,500 acre-feet of water is not available for allocation from the completed All-American Canal Lining Project in a Calendar Year.

(b) After the Secretary notifies the Parties of the completion of construction of the Coachella Canal Lining Project, the Secretary shall deliver for the benefit of the San Luis Rey Settlement Parties water determined by the Secretary under Article 5 of this Allocation Agreement to be available for allocation as a result of the Coachella Canal Lining Project, up to 4,500 acre-feet of water per Calendar Year. After

completion of the All-American Canal Lining Project, the delivery amount from the Coachella Canal Lining Project after completion of construction shall be increased, not to exceed a total of 16,000 acre-feet of water per Calendar Year, in the event and to the extent that a full 11,500 acre-feet of water is not available for allocation from the All-American Canal Lining Project for delivery for the benefit of the San Luis Rey Settlement Parties in that Calendar Year on an acre-foot per acre-foot basis to the extent such water is determined by the Secretary under Article 5 of this Allocation Agreement to be available for allocation as a result of the Coachella Canal Lining Project.

7.5 Post Quantification Settlement Agreement. After the termination of the Quantification Settlement Agreement, the Secretary shall deliver water for the benefit of the San Luis Rey Settlement Parties in accordance with Sections 7.5.1, 7.5.2, and 7.5.3 herein and shall account for the water as Priority 3(a) or Priority 6(a) of the priorities set forth in the Colorado River water delivery contracts with the Secretary, in proportion to the respective priorities associated with the total amount of water flowing in the All-American Canal past Pilot Knob in that Calendar Year.

7.5.1 Prior to the end of each Calendar Year the Secretary shall determine the total amount of the water available for allocation in the next Calendar Year as a result of both Projects. Water available for allocation shall mean an amount equal to the water conserved by the Projects.

7.5.2 During construction, the Secretary shall deliver for the benefit of the San Luis Rey Settlement Parties 17 percent of the water determined by the Secretary to be available for allocation as a result of the All-American Canal Lining Project, not to exceed 17 percent of the total amount of water available for allocation that Calendar Year

as a result of both Projects with the amount of water available for allocation as a result of the All-American Canal Lining Project being a proportionate share of the total amount available for allocation as a result of both Projects, and not to exceed 16,000 acre-feet per Calendar Year. After the Secretary has issued the notice of completion of construction for both Projects, the Secretary shall deliver water available for allocation as a result of the All-American Canal Lining Project for the benefit of the San Luis Rey Settlement Parties in an amount proportionate to the total amount of water available for allocation that Calendar Year from both Projects, not to exceed 16,000 acre-feet of water per Calendar Year.

7.5.3 During construction, the Secretary shall deliver for the benefit of the San Luis Rey Settlement Parties 17 percent of the water determined by the Secretary to be available for allocation as a result of the Coachella Canal Lining Project, not to exceed 17 percent of the total amount of water available for allocation that Calendar Year as a result of both Projects with the amount of water available for allocation as a result of the Coachella Canal Lining Project being a proportionate share of the total amount available for allocation as a result of both Projects, and not to exceed 16,000 acre-feet of water per Calendar Year. After the Secretary has issued the notice of completion of construction for both Projects, the Secretary shall deliver water available for allocation as a result of the Coachella Canal Lining Project for the benefit of the San Luis Rey Settlement Parties in an amount proportionate to the total amount of water available that Calendar Year from both Projects, not to exceed 16,000 acre-feet of water per Calendar Year.

7.6 Unused Water. During the term of this Allocation Agreement, water available to but not delivered for the benefit of the San Luis Rey Settlement Parties and water not available for the benefit of the San Luis Rey Settlement Parties because the conditions specified in Sections 7.2.1, 7.2.2, or 7.2.4 herein have not yet been satisfied, shall be delivered by the Secretary to MWD, subject to IID's right to call on water under Article 9 of this Allocation Agreement. Such deliveries made to MWD because the conditions specified in Sections 7.2.1, 7.2.2, or 7.2.4 herein have not yet been satisfied will be made until all three conditions have been met. After the termination of this Allocation Agreement, the Secretary shall deliver any such unused water in accordance with priorities set forth in then existing contracts for the delivery of Colorado River water.

7.7 Non-Preclusion of Benefits. Nothing in this Article 7 precludes the San Luis Rey Settlement Parties from receiving benefits under other agreements associated with rights under this Allocation Agreement.

ARTICLE 8

Post-Quantification Settlement Agreement Allocation To California Contractors

8.1 IID's Call Rights and Obligations to Make Capital Cost Payments.

Commencing upon the termination of the Quantification Settlement Agreement, for the remaining 110 Calendar Years comprising the initial and renewal terms of this Allocation Agreement, the water available for allocation to SDCWA as a result of the Projects shall be subject to IID's call rights and IID's obligation to make Capital Cost Payments to SDCWA in accordance with the provisions of Article 9 below.

8.2 CVWD Waiver of Call Rights. CVWD waives any and all call rights it may have to the water available for allocation to SDCWA as a result of the Projects for the 110-Calendar Year term of this Allocation Agreement and any and all Extension Years.

ARTICLE 9

Allocation of Water to IID

9.1 Obligation to Deliver Water During Term of Allocation Agreement.

During the term of this Allocation Agreement, the Secretary shall deliver Colorado River water available for allocation from one or both Projects to IID each Calendar Year, as requested by IID, in 5,000 acre-foot increments, to the extent such water is available after allocation for the benefit of the San Luis Rey Settlement Parties under Article 7 of this Allocation Agreement and subject to the provisions specified in Sections 9.2 through 9.5 and Section 9.7 herein.

9.2 Conditions on Delivery of Water. The Secretary's obligation to deliver water to IID in any given Calendar Year during the term of this Allocation Agreement shall be conditioned upon the occurrence of each of the following:

9.2.1 The Secretary has determined the availability of sufficient water to allocate such for the benefit of the San Luis Rey Settlement Parties under Article 7 of this Allocation Agreement; and

9.2.2 The Secretary has determined under the Criteria for Coordinated Long-range Operation of Colorado River Reservoirs, and any other applicable law or policy, the existence of surplus Colorado River water for that Calendar Year; and

9.2.3 The delivery of such water to IID will have no Effects on MWD;
and

9.2.4 IID has requested the delivery of water from one or both of the Projects in increments of 5,000 acre-feet of water per Calendar Year by providing written notice to the United States, MWD and SDCWA within 60 days after declaration of a surplus by the Secretary occurring on or before March 1 for either the current Calendar Year or the following Calendar Year, or 30 days after declaration of a surplus by the Secretary occurring on or after March 2 for the current Calendar Year; and

9.2.5 Neither MWD nor SDCWA has informed IID and the United States in writing within 30 days after receipt of IID's notice as to whether IID's election would have one or more Effects on MWD. If either MWD or SDCWA informs IID and the United States that IID's election would have one or more Effects on MWD and provides its information, criteria, and reasoning regarding the Effects on MWD, Reclamation will deliver such water to SDCWA. If IID disputes MWD's or SDCWA's determination, the dispute shall be submitted for arbitration in accordance with Section 17.3 to determine whether to accept or reject MWD's or SDCWA's determination within 30 days following receipt of IID's documentation of the information, criteria, and reasoning on which it relies regarding the Effects on MWD, after having given full consideration to IID and MWD's or SDCWA's documentation. MWD and SDCWA shall have 15 days following the receipt of IID's notice of dispute to provide any additional documentation regarding the Effects on MWD for arbitration. IID shall have 15 days following MWD's or SDCWA's submittal of any additional documentation regarding the Effects on MWD to provide its own additional documentation regarding

new issues associated with the Effects on MWD raised by MWD or SDCWA for arbitration. If the arbitrator finds for IID, IID shall be entitled to divert the increments of water which is the subject of the dispute. If the arbitrator finds for MWD or SDCWA the water shall be delivered to SDCWA. In no event shall the diversion/delivery of water to one Party cause another Party to increase its obligation to pay back water under the Inadvertent Overrun and Payback Policy due to such diversion. In the event water is delivered to SDCWA which is subsequently determined should have been delivered to IID, any obligation for repayment of such water or any related obligation shall be the sole obligation and responsibility of SDCWA.

9.2.6 IID has advanced funds to pay its proportionate share of Costs for any water requested by IID from the Coachella Canal Lining Project, as determined and required under Articles 13 and 14 of this Allocation Agreement and for water from the All American Canal and has adjusted, as applicable, amounts paid or to be paid by SDCWA under Articles 13 and 14 of this Allocation Agreement, with a notice of same to the Secretary.

9.3 Point of Delivery. The Secretary shall deliver any water available to IID under this Article 9 at Imperial Dam.

9.4 Uncontrollable Forces. In the event the Secretary determines that the amount of water available for allocation from one or both Projects is reduced due to an Uncontrollable Force, IID shall forbear from exercising its right to water from each such Project under this Article 9 by a proportionate amount based on the quantity of the reduction in the total amount of water available for allocation to SDCWA from that Project as a result of the Uncontrollable Force.

9.5 Years 46 Through Termination of the Quantification Settlement

Agreement. In addition to IID's rights under Section 9.2, during Years 46 through termination of the Quantification Settlement Agreement, IID may exercise its call rights to obtain an amount not to exceed the lesser of one-half of the water available for allocation to SDCWA as a result of the Projects or 38,850 acre-feet per Calendar Year when the Secretary has determined under the Criteria for Coordinated Long-range Operation of Colorado River Reservoirs, and any other applicable law or policy, the absence of a surplus as defined in Section 9.2.2 for that Calendar Year. The exercise of IID's call rights under this Section shall be in accordance with and subject to the conditions set forth in Sections 9.2.1 and 9.2.6.

9.5.1 To the extent that IID exercises its call rights under this Section 9.5 in non-surplus years, during Years 46 through termination of the Quantification Settlement Agreement this Allocation Agreement shall be extended for the number of Calendar Years necessary for the Secretary to fully deliver to SDCWA a volume of water equal to the volume of IID Call Water. To the extent that IID exercises its Call Rights under Section 9.2 in surplus years in Years 46 through termination of the Quantification Settlement Agreement, this Allocation Agreement shall be extended for the number of Calendar Years necessary for the Secretary to fully deliver a volume of water equal to the volume of IID Call Water, but in no event shall such extension be greater than ten (10) Calendar Years. In each particular Extension Year, the Secretary shall deliver to SDCWA 77,700 acre-feet or such lesser amount as will fully deliver an amount of water equal to the remainder of the IID Call Water. The delivery of an amount of water equal to all IID Call Water shall commence upon the completion of delivery to SDCWA of an

amount of water equal to all Cumulative Shortage Losses pursuant to Section 5.6. IID shall have no right to make calls on the water being delivered to SDCWA by the Secretary in any Extension Year.

9.6 Post-Quantification Settlement Agreement. In addition to IID's rights under Section 9.2, after the termination of the Quantification Settlement Agreement, the Secretary's obligation to deliver water available for allocation as a result of the Projects to IID in any given Calendar Year shall be conditioned upon the occurrence of each of the following:

9.6.1 The Secretary has determined the availability of sufficient water to allocate such for the benefit of the San Luis Rey Settlement Parties under Article 7 of this Allocation Agreement; and

9.6.2 IID has requested the delivery of water from one or both of the Projects by providing written notice to the United States, MWD, SDCWA and CVWD 120 days prior to IID's intended diversion of the first acre-foot of water in the following Calendar Year; and

9.6.3 IID has advanced funds to pay, with a notice of same to the Secretary:

9.6.3.1 its proportionate share of Costs for any water requested by IID from the Coachella Canal Lining Project as determined and required under Articles 13 and 15 of this Allocation Agreement and for water from the All-American Canal and has adjusted, as applicable, amounts of Costs paid or to be paid by SDCWA under Articles 13 and 15; and

9.6.3.2 a Capital Cost Payment to SDCWA of capital costs calculated in accordance with Exhibit B attached hereto and incorporated herein. The State's contributions, which funded the Project's or Projects' conservation of water, shall be deemed to have been made by SDCWA for the purposes of calculating the Capital Cost Payment.

9.6.4 To the extent that IID exercises its call rights under this Section 9.6 in non-surplus years after termination of the Quantification Settlement Agreement, this Allocation Agreement shall be extended for the number of Calendar Years necessary for the Secretary to fully deliver to SDCWA a volume of water equal to the volume of IID Call Water. To the extent that IID exercises its Call Rights under Section 9.2 in surplus years after termination of the Quantification Settlement Agreement, this Allocation Agreement shall be extended for the number of Calendar Years necessary for the Secretary to fully deliver a volume of water equal to the volume of IID Call Water, but in no event shall such extension be greater than ten (10) Calendar Years, minus the number of Calendar Years extended for IID Call Rights in surplus years during Years 46 through the termination of the Quantification Settlement Agreement. In each particular Extension Year, the Secretary shall deliver to SDCWA 77,700 acre-feet or such lesser amount as will fully deliver an amount of water equal to the remainder of the IID Call Water. The delivery of an amount of water equal to all IID Call Water shall commence upon the completion of delivery to SDCWA of an amount of water equal to all Cumulative Shortage Losses pursuant to Section 5.6. IID shall have no right to make calls on the water being delivered to SDCWA by the Secretary in any Extension Year.

9.7 Unused Water. During the term of this Allocation Agreement, water available to but not taken by IID under this Article 9 shall be delivered by the Secretary to SDCWA.

9.8 Non-consensual Termination of the Allocation Agreement. In the event of a non-consensual termination of the Allocation Agreement prior to 110 years from the Effective Date plus any Extension Years due to final judgment of a court of competent jurisdiction on litigation filed by a third party, or a final binding administrative decision of a third party, or for any other reason, the Parties are obligated to enter into a new agreement that effectuates the purposes of this Allocation Agreement for the period from the date of termination through Year 110 plus any Extension Years to the extent legally feasible. The Parties agree to defend this Allocation Agreement against such litigation or administrative proceeding. If CVWD does not immediately enter into such a new agreement with IID, SDCWA and MWD, notwithstanding the provisions of Section 203(c)(5) of Title II, CVWD shall compensate SDCWA for the State and SDCWA's collective participation in the funding of the All-American Canal Lining Project and Coachella Canal Lining Project, respectively. If IID does not immediately enter into such a new agreement with CVWD, SDCWA and MWD, notwithstanding the provisions of Section 203(c)(5) of Title II, IID shall compensate SDCWA for the State and SDCWA's collective participation in the funding of the All-American Canal Lining Project and Coachella Canal Lining Project, respectively. If neither IID nor CVWD immediately enters into such a new agreement with SDCWA and MWD, notwithstanding the provisions of Section 203(c)(5) of Title II, IID and CVWD shall compensate SDCWA for the State and SDCWA's collective participation in the funding of the All-American Canal

Lining Project and Coachella Canal Lining Project, respectively. Such compensation shall be equal to the replacement value of said Project less depreciation. Such replacement value shall be equal to the cost of: preparing environmental documentation, planning, designing, and constructing the Project, assuming the Project is completed on the date of early termination of this Allocation Agreement. Such depreciated value is to be based upon an engineering analysis by the Secretary of the remaining useful life of the Project at the early termination of this Allocation Agreement.

ARTICLE 10

Allocation of Water to SDCWA

10.1 Obligation to Deliver Water. During Years 1 through 45 of the Quantification Settlement Agreement, subject only to adjustments required due to either (i) the determination by the Secretary in any year of a shortage or (ii) a Project or Projects is complete and the cumulative amount of water conserved by the Projects is determined to be less than 93,700 acre feet per year, the Secretary shall deliver Colorado River water available for allocation as a result of the Projects to SDCWA each Calendar Year in accordance with Sections 10.1.1 through 10.1.3 herein.

10.1.1 During the construction of each Project, the Secretary shall deliver all water available for allocation from that Project to SDCWA each Calendar Year to the extent water is available for allocation after the allocation of water under Article 7 of this Allocation Agreement and the allocation of water to IID under Article 9 of this Allocation Agreement.

10.1.2 After completion of the All-American Canal Lining Project, the Secretary shall deliver 56,200 acre-feet of water per Calendar Year as a result of that

Project to SDCWA, minus the amount of water used by IID under Article 9 of this Allocation Agreement and minus the amount of water, if any, in excess of 11,500 acre-feet delivered for the benefit of the San Luis Rey Settlement parties pursuant to Section 7.4.1 of this Allocation Agreement.

10.1.3 After completion of the Coachella Canal Lining Project, the Secretary shall deliver 21,500 acre-feet of water per Calendar Year as a result of that Project, or an amount equal to the amount conserved as a result of that Project minus 4,500 acre-feet should a determination be made to construct a parallel canal and new siphons from Siphon 7 to Siphon 32 and should canal diversions not supply marsh/aquatic and desert riparian habitat, to SDCWA, minus the amount of water used by IID under Article 9 of this Allocation Agreement and minus the amount of water, if any, in excess of 4,500 acre-feet delivered for the benefit of the San Luis Rey Settlement parties pursuant to Section 7.4.2 of this Allocation Agreement.

10.2 Conditions on Delivery of Water. The Secretary's obligation to deliver water to SDCWA in any given Calendar Year shall be conditioned upon the occurrence of each of the following:

10.2.1 The Secretary has determined the availability of sufficient water to allocate such for the benefit of the San Luis Rey Settlement Parties under Article 7 of this Allocation Agreement and during the construction of each Project the use of such by IID under Article 9 of this Allocation Agreement.

10.2.2 SDCWA has advanced funds to pay its proportionate share of Costs for any water requested by SDCWA, as determined and required under Articles 13 and 15 of this Allocation Agreement.

10.3 Point of Delivery. The Secretary shall deliver any water available for the benefit of SDCWA under this Article 10 to a point or points of delivery along the Colorado River from Lake Havasu to Imperial Dam or, subject to the approval of the Secretary and subject to any additional environmental compliance, elsewhere.

10.4 Unused Water. During the term of this Allocation Agreement, water available to but not taken by SDCWA under this Article 10 shall be delivered by the Secretary in accordance with the terms of the water delivery contracts which MWD, IID, and CVWD hold with the Secretary.

10.5 Years 46 through Termination of the Quantification Settlement Agreement. During Years 46 through termination of the Quantification Settlement Agreement, subject to the provisions for adjustment in Section 10.1, the Secretary's obligation to deliver water available for allocation as a result of the Projects to SDCWA in any given Calendar Year shall be conditioned upon the occurrence of each of the following:

10.5.1 The Secretary has determined the availability of sufficient water to allocate such for the benefit of the San Luis Rey Settlement Parties under Article 7 of this Allocation Agreement; and

10.5.2 The Secretary has determined the availability of sufficient water to allocate to IID pursuant to Section 9.5 of this Allocation Agreement.

10.6 Post-Quantification Settlement Agreement. After the termination of the Quantification Settlement Agreement, the Secretary's obligation to deliver water available for allocation as a result of the Projects to SDCWA in any given Calendar Year

shall be subject to the adjustments set forth in Section 10.1 and conditioned upon the occurrence of each of the following:

10.6.1 The Secretary has determined the availability of sufficient water to allocate such for the benefit of the San Luis Rey Settlement Parties under Article 7 of this Allocation Agreement; and

10.6.2 The Secretary has determined the availability of sufficient water to allocate to IID pursuant to Section 9.6 of this Allocation Agreement.

ARTICLE 11

Colorado River Compact

This Allocation Agreement is subject to the Colorado River Compact of 1922.

ARTICLE 12

Canal Lining Projects OM&R Coordinating Committees

12.1 Establishment of Committees. As a means of securing prompt, orderly and effective cooperation and exchange of information and providing consultation, review, recommendation, and/or approval among the Parties in connection with the additional costs of operation, maintenance, and repair of the All-American Canal and the Coachella Canal to be determined by the Secretary under Section 203(b) of Public Law 100-675, the Parties hereby establish the All-American Canal Lining Project OM&R Coordinating Committee (“AAC Committee”) and the Coachella Canal Lining Project OM&R Coordinating Committee (“CC Committee”). The AAC Committee and the CC Committee may each also be referred to as “Committee.”

12.2 Committee Membership. During the term of the Quantification Settlement Agreement, Committee membership and participation shall be in accordance with

Sections 12.3 and 12.4 herein. After the termination of the Quantification Settlement Agreement, Committee membership with respect to Section 12.3 herein shall include a representative from each entity that is obligated to pay Costs under Article 15 of this Allocation Agreement, together with representatives from IID and CVWD and a selected chairperson as set forth in Section 12.3 herein. The Committees shall continue to include a Reclamation participant as set forth in Section 12.4 herein.

12.3 Voting Members. The AAC Committee shall consist of the following voting members: one member duly authorized and appointed each by IID, CVWD and SDCWA; one member duly authorized and appointed by the San Luis Rey Settlement Parties; and an additional member to be jointly appointed and agreed upon by the Committee members appointed by IID, CVWD, SDCWA, and the San Luis Rey Settlement Parties. The CC Committee shall consist of the following voting members: one member duly authorized and appointed each by CVWD and SDCWA; one member duly authorized and appointed by the San Luis Rey Settlement Parties; and an additional member to be jointly appointed and agreed upon by the Committee members appointed by CVWD, SDCWA, and the San Luis Rey Settlement Parties. All such members shall have technical competence in the operation, maintenance, and repair of major water supply facilities. IID, CVWD, SDCWA, and the San Luis Rey Settlement Parties shall each designate its member within 30 days after the Effective Date of this Allocation Agreement. The AAC Committee member appointed jointly by the IID, CVWD, SDCWA, and San Luis Rey Settlement Parties members shall be the chairperson of the AAC Committee and shall be responsible for presiding over the meetings of the AAC Committee. The CC Committee member appointed by the CVWD, SDCWA, and San

Luis Rey Settlement Parties members shall be the chairperson of the CC Committee and shall be responsible for presiding over the meetings of the CC Committee. Following the initial selection of the members, all changes in the respective Committee's membership shall be made promptly and in such a fashion that it will not interfere with the duties and responsibilities of the respective Committee.

12.4 Reclamation Participation. One non-voting participant on each Committee will be duly authorized and appointed by Reclamation. Reclamation's participant will provide the respective Committee with technical information so that the Committee may make recommendations for Reclamation's consideration.

12.5 Meetings. Each Committee chairperson shall schedule meetings of the chairperson's respective Committee upon the request of any member of that Committee and shall provide each member 15 days written notice of the time, place, and subject of the meeting. The 15-day notice period may be waived if a written waiver is signed by each member of that Committee or by the appearance of the member(s) at the meeting. In the event all members of that Committee are not present, the chairperson shall send a letter with any proposed action to be taken to the absent member(s) by certified mail, postage prepaid, return receipt requested. If the chairperson receives no written protest from the absent member(s) within 30 days of the date of the receipt of the letter, the proposed action shall be final.

12.6 Actions and Recommendations. All actions and recommendations of each Committee shall be set forth in writing consistent with the intent and the rights of the Parties under this Allocation Agreement, and limited to the duties and responsibilities delegated to it in this Allocation Agreement. All actions and recommendations of each

Committee shall be by majority vote of the voting members of that Committee. By mutual written agreement among the Parties, the duties and responsibilities of each Committee may be modified. Each Committee may retain consultants as necessary to perform duties.

ARTICLE 13

Determination of Costs

13.1 Determination of Costs. IID and CVWD shall develop and regularly update an operation and maintenance plan for all completed reaches of the All-American Canal Lining Project and Coachella Canal Lining Project, respectively, from which Costs are to be determined. Costs shall be the combined total Net Additional OM&R Costs and Mitigation Costs as determined under this Article 13.

13.2 Net Additional OM&R Costs. Net Additional OM&R Costs shall be determined by calculating actual costs less base costs, but not in any case to be less than zero. Actual costs are the annual operation, maintenance, and repair costs associated with the Project incurred by IID or CVWD in any Calendar Year after the first reach of a Project is transferred to operations status. Base costs are the average annual operation, maintenance, and repair costs for the ten-Calendar Year period prior to the Calendar Year in which the first reach of that Project is transferred to operations status and for the All-American Canal Lining Project are calculated by using the annual sum of Section 4 and 52.78 percent of Section 5 costs. Following the transfer of the first reach of a Project, but prior to the transfer of the completed Project to operation status, a percentage of the base cost shall be utilized for determining the Net Additional OM&R Costs. Such percentage (expressed as a decimal) shall be equal to the length of reach(es) transferred to operation

status for the Project divided by the total length of reaches comprising the completed Project. Such base cost shall be changed by a price index annually. The price index to be utilized shall be determined by the AAC Committee for both the All-American Canal Lining Project and for the Coachella Canal Lining Project. The costs to be considered in IID's and CVWD's procedures, which are to be included in the All-American Canal Lining Project and Coachella Canal Lining Project operation and maintenance plans, respectively, to calculate the Net Additional OM&R Costs shall be limited to the following:

13.2.1 Any operation and maintenance costs, including the cost of insurance, directly resulting from completion of a Project which exceed the benefits derived from increasing the regulating and storage capacity of that canal, and any repair or other corrective action costs which would not have occurred in the absence of that Project in the case of earthquake or other acts of God, including necessary features that are constructed and installed to offset any loss of regulating and storage capacity of the canal resulting from such earthquakes or other acts of God.

13.2.2 To the extent not reimbursable by insurance, any costs and claims of injury, damages and losses suffered by IID, relating to the All-American Canal Lining Project, or by CVWD, relating to the Coachella Canal Lining Project, which are attributable to the operation, maintenance, and repair of the respective Project, and which would not have occurred in the absence of the Project, including legal and other professional services and court costs, unless attributable to the gross negligence or willful misconduct of the agency responsible for the operation, maintenance, and repair of that

canal or the gross negligence or willful misconduct of that agency's officers, employees or agents.

13.2.3 Costs charged by the AAC Committee member jointly appointed and agreed upon by IID, CVWD, SDCWA, and the San Luis Rey Settlement Parties members, costs charged by the CC Committee member jointly appointed and agreed upon by CVWD, SDCWA, and the San Luis Rey Settlement Parties, and the costs charged by consultants retained by the respective Committees following the transfer of a Project or any particular reach thereof to operations status. The Parties do not intend for the Committee Chairperson to devote his or her full time to the respective Committee but rather to limit his or her involvement to preparation for and attendance at meetings, review and approval of documents, periodic field inspection and fiscal audits, and any other activities approved by the respective Committee relating to the respective Project. IID, CVWD, SDCWA, and the San Luis Rey Settlement Parties shall each bear the costs of their respective Committee representative with respect to all Committee activities.

13.3 Mitigation Costs. Mitigation Costs shall be the costs relating to the monitoring, operation, maintenance, and repair of the mitigation features relating to each Project, in accordance with the Environmental Commitment Plan applicable to the Project.

13.4 Estimation of Costs. Within 45 days of the date that water is first made available for allocation from a Project, IID for the All-American Canal Lining Project and CVWD for the Coachella Canal Lining Project shall utilize the procedures developed under Sections 13.1 through 13.3 herein and approved by the Committee and Reclamation to calculate and submit estimated Net Additional OM&R Costs and

estimated Mitigation Costs, including the associated carrying costs, to its respective Committee for the period beginning with the date that Net Additional OM&R Costs began to be incurred through the end of that Calendar Year. For the following Calendar Years, the estimated Net Additional OM&R Costs and the estimated Mitigation Costs shall be prepared prior to September 15th of each Calendar Year for the following Calendar Year.

13.5 Approval of Costs. Within 90 days of the date that water is first made available for allocation as a result of a Project and in the following Calendar Years prior to November 1st, the Committee for that Project shall review the estimated Net Additional OM&R Costs and the estimated Mitigation Costs for the respective period, and either accept them or suggest any modification thereto. If accepted, the Committee shall recommend them to the Secretary for approval and they shall be utilized for billing when approved. If the Committee suggests modifications, IID for the All-American Canal Lining Project and CVWD for the Coachella Canal Lining Project may submit revised estimated Net Additional OM&R Costs and/or Mitigation Costs to the Committee within 120 days of the date that water is first made available for allocation from a Project and November 30th for the following Calendar Years. Within 15 days after receipt, the Committee shall review and either accept the revised estimated Net Additional OM&R Costs and/or revised estimated Mitigation Costs and recommend them for approval by the Secretary or reject them and suggest changes. If IID does not accept the suggestions of the AAC Committee, or if CVWD does not accept the suggestions of the CC Committee, the determination of the Net Additional OM&R Costs and/or the estimated Mitigation Costs shall be subject to the provisions of Article 17 of this Allocation Agreement and

the decision from that process shall be forwarded as a recommendation to the Secretary for approval by the Secretary and when approved shall be utilized for billing purposes for the next Calendar Year. If the Committee does not respond within 45 days after receipt of estimated Net Additional OM&R Costs and Mitigation Costs or within 15 days of receipt of a revised estimate, the Net Additional OM&R Costs and Mitigation Costs contained in IID or CVWD's estimate or revised estimate, as the case may be, shall be forwarded for approval by the Secretary and when approved, utilized for billing purposes for the next Calendar Year.

ARTICLE 14

Invoicing and Payment of Costs

14.1 Invoicing. Within 135 days of the date that water is first made available for allocation from a Project, and thereafter prior to December 16th of each Calendar Year, IID for the All-American Canal Lining Project, and CVWD for the Coachella Canal Lining Project, shall, by certified mail, send an invoice to the San Luis Rey Settlement Parties and an invoice to SDCWA for their respective proportionate shares, determined in accordance with Articles 13 and 15 of this Allocation Agreement, of the estimated Costs for the following Calendar Year. CVWD shall in any Calendar Year in which IID has exercised its rights under Article 9 of this Allocation Agreement, by certified mail, send an invoice to IID for its respective proportionate share and adjust as applicable SDCWA's share by an equivalent amount, determined in accordance with Articles 13 and 15 of this Allocation Agreement, of the estimated Costs for the following Calendar Year. After the termination of the Quantification Settlement Agreement, SDCWA shall by certified mail send an invoice to IID for the Capital Cost Payment at

least 35 days prior to IID's intended diversion of the first acre-foot of IID Call Water in the following Calendar Year. The invoices shall be submitted to:

San Luis Rey Indian Water Authority
Attention: General Manager
P.O. Box 428
Pauma Valley, California 92061

Vista Irrigation District
Attention: General Manager
1391 Engineer Street
Vista, California 92081

City of Escondido
Attention: City Manager
Civic Center Plaza
201 North Broadway
Escondido, California 92025

Imperial Irrigation District
Attention: General Manager
P.O. Box 937
Imperial, CA 92251

San Diego County Water Authority
Attention: General Manager
4677 Overland Avenue
San Diego, CA 92123

14.2 Payment. The San Luis Rey Settlement Parties, SDCWA and IID, shall each pay the amounts of the first invoices received with respect to each Project within 45 days of receipt of its respective invoice. Thereafter, the San Luis Rey Settlement Parties, SDCWA and IID shall each pay the amount of its respective invoice prior to the Due Day. In the event that any payment is delinquent, an additional charge equal to two percent of such delinquent payment for each month or portion thereof that such payment remains delinquent shall be assessed, and the delinquent Party shall pay such charge in addition to the amount of such delinquent payment. Notwithstanding the above, if the

total period of delinquency does not exceed five business days, the additional charge shall be equal to one percent of such delinquent payment. Invoices for delinquencies including additional charges shall be mailed not later than the tenth day following the Due Day.

14.3 Deposit of Funds. IID for the All-American Canal Lining Project and CVWD for the Coachella Canal Lining Project shall promptly deposit the funds received from the San Luis Rey Settlement Parties in a separate legally permissible interest-bearing account, and shall promptly deposit the funds received from SDCWA in another separate legally permissible interest-bearing account. CVWD shall promptly deposit the funds received from IID in a third separate legally permissible interest-bearing account. Each account shall be opened at a bank or trust company having trust assets of at least five hundred million dollars (\$500,000,000). Eligibility for deposit of the funds received shall be limited to those financial institutions that maintain a rating equivalent to a Keefe Bank Watch Service of "B/C" or better. Interest on the funds on deposit in such accounts shall be retained therein and used to pay Costs. IID and CVWD shall make withdrawals from the accounts only for approved Costs.

14.4 Unanticipated Costs. If the amount billed by IID or CVWD and paid by the San Luis Rey Settlement Parties, SDCWA, and IID in any Calendar Year in which IID has exercised its rights under Article 9 of this Allocation Agreement, is insufficient to cover the Costs for the Calendar Year invoiced, IID for the All-American Canal Lining Project or CVWD for the Coachella Canal Lining Project shall submit a revised estimate of Costs to the applicable Committee for the balance of said period which reflects the unanticipated costs. Within 15 days thereafter, the Committee shall review the unanticipated costs and either accept them or suggest any modification thereto. If

accepted, the Committee shall recommend them to the Secretary for approval. If IID for the All-American Canal Lining Project or CVWD for the Coachella Canal Lining Project does not accept any modification suggested by the Committee, the determination of the Costs shall be subject to the provisions of Article 17 of this Allocation Agreement and the result of that process shall be forwarded to the Secretary for approval. Within 7 days following approval of the revised estimate of Costs by the Secretary, IID or CVWD as the case may be shall send invoices by certified mail to appropriate entities reflecting the increased costs, and those entities shall pay the invoiced amounts within 30 days after receipt. If the 30th day falls on a Saturday, Sunday or a State legal holiday, the due day shall be the next succeeding business day.

14.5 Payment of Costs in Dispute by a Party. If a Party disputes an amount in an invoice, within 30 days of receipt of the invoice, payment of the undisputed amount and 50 percent of the disputed amount shall be made. The determination of the propriety of the disputed amount shall be subject to the provisions of Article 17 of this Allocation Agreement. In the event that the disputed amount is determined to be an improper charge, the 50 percent of the disputed amount paid shall be returned, together with interest earned. In the event that the disputed amount is determined to be a proper charge, the 50 percent of the disputed amount unpaid shall be paid with interest as if it were a delinquent payment.

14.6 Receipt of Excess Payment If the amounts paid by the San Luis Rey Settlement Parties, SDCWA and IID pursuant to all invoices during a Calendar Year, together with the interest earned on the funds, are in excess of the actual costs to date for that Calendar Year and the remaining projected costs for the Calendar Year, as projected

on December 1st of that Calendar Year, IID for the All-American Canal Lining Project and CVWD for the Coachella Canal Lining Project shall credit the excess (including both principal and interest) against the first payments due in the following Calendar Year, and shall show such credit on the invoices sent. To the extent the excess amount exceeds the first invoices sent, the amount of the remaining excess funds shall be credited to successive payments due until exhausted, and shall show such credits on the invoices sent. Any funds remaining in these accounts upon termination of rights to receive water under this Allocation Agreement shall be refunded within 30 days.

ARTICLE 15

Obligation to Pay and Allocation of Project Costs

15.1 Obligation to Pay. During the term of the Quantification Settlement Agreement, the San Luis Rey Settlement Parties, SDCWA, and, to the extent IID exercises its rights to water allocated from the Coachella Canal Lining Project, IID, shall pay the Costs determined to be the respective share of each such entity in accordance with this Article 15 of this Allocation Agreement. After the termination of the Quantification Settlement Agreement, Costs will continue to be allocated in accordance with the procedures of this Article 15. The Secretary shall not deliver water allocated as a result of the Projects to any entity except after:

15.1.1 *Payment of Costs to IID for the All-American Canal Lining Project and to CVWD for the Coachella Canal Lining Project, as such Costs are allocated in this Article 15 and in accordance with the invoicing and payment procedures set forth in Article 14 of this Allocation Agreement; and*

15.1.2 Payment of Capital Cost Payments to SDCWA, as applicable under Article 9 of this Agreement, pursuant to Exhibit B.

15.2 Allocation of Costs. Each entity shall pay its proportionate share of the Costs.

15.2.1 The Costs attributable to each entity for water allocated to or for the benefit of that entity from each Project will be based on the ratio of the amount of water made available to or for the benefit of that entity from a Project and the total amount of water conserved on a Calendar Year basis from that Project. The ratio for each Project shall be multiplied by the Costs for that Project to determine the entity's proportionate share of the Costs for that Project.

15.2.2 Should a Party not pay or pay an insufficient amount of the Costs within 30 days of the Due Day, IID for the All-American Canal and CVWD for the Coachella Canal shall send a Notice of Default by certified mail, return receipt requested, to the defaulting entity. If within five business days of receipt of that Notice of Default by the defaulting entity full payment has not been received, IID for the All-American Canal Lining Project and CVWD for the Coachella Canal Lining Project shall, during the term of the Quantification Settlement Agreement, inform the United States and SDCWA on the sixth business day following receipt of the Notice of Default by the defaulting entity, and the Secretary shall deliver an amount of water equal to the amount of water for which the Costs have not been paid to SDCWA, upon payment by SDCWA within 30 days of SDCWA's receipt of the notice from IID or CVWD as the case may be. After the term of the Quantification Settlement Agreement, IID and CVWD shall inform the United States, SDCWA, and such other entity or entities as will then be entitled to the

delivery of this water of its availability and, upon full payment of the unpaid Costs within 30 days of that entity's receipt of the notice from IID or CVWD, the United States shall deliver the water to that entity or entities entitled to the delivery including, if applicable, delivery to SDCWA. Any dispute as to the entity or entities entitled to the delivery of the water shall be subject to the provisions of Article 17 of this Allocation Agreement.

15.2.3 The Secretary shall not deliver water to an entity that is not a Party unless IID or CVWD as the case may be has notified the Secretary that all Costs, including a revised estimate of Costs approved by the Secretary under Section 13.5 herein, to be paid by that entity have been paid. Should an entity that is not a Party not pay or pay an insufficient amount of the Costs within 30 days of the Due Day, IID for the All-American Canal and CVWD for the Coachella Canal shall send a Notice of Default by certified mail to the defaulting entity. If within five business days of receipt of that Notice of Default by the defaulting entity full payment has not been received, IID for the All-American Canal Lining Project and CVWD for the Coachella Canal Lining Project shall, during the term of the Quantification Settlement Agreement, inform the United States and SDCWA on the sixth business day following receipt of the Notice of Default by the defaulting entity, and the Secretary shall deliver an amount of water equal to the amount of water for which the Costs have not been paid to SDCWA, upon payment by SDCWA within 30 days of SDCWA's receipt of the notice from IID or CVWD as the case may be. After the term of the Quantification Settlement Agreement, IID and CVWD shall inform the United States, SDCWA, and such other entity or entities as may then be entitled to the delivery or exchange of this water of its availability and, upon full payment of the unpaid Costs within 30 days of that entity's receipt of the notice from IID or

CVWD, the United States shall deliver the water to that entity or entities entitled to the delivery, or, if applicable, to SDCWA. Any dispute as to the entity or entities entitled to the delivery of the water shall be subject to the provisions of Article 17 of this Allocation Agreement.

15.2.4 In any Calendar Year in which an entity declines to take a portion of water made available for allocation to or for the benefit of that entity as a result of the Projects, and another entity is entitled to and elects to receive and pay for that amount of water, the first entity shall be relieved of its obligation to pay the Costs for that amount of water but only to the extent that the Costs are paid by the second entity.

15.2.5 No entity shall be required to pay IID the Costs associated with water resulting from the All-American Canal Lining Project which is allocated to IID, and no entity shall be required to pay CVWD the Costs associated with water resulting from the Coachella Canal Lining Project which is allocated to CVWD.

ARTICLE 16

Audit and Limitation on Use of Funds

16.1 Audit of Costs. Annually, upon 10 days' written notice, the San Luis Rey Settlement Parties, and/or SDCWA may audit or cause to be audited records of expenditures of funds provided by the San Luis Rey Settlement Parties and/or SDCWA, respectively. IID shall keep separate records of such funds and expenditures thereof for the Costs associated with the All-American Canal Lining Project, in accordance with generally accepted accounting practice. CVWD shall keep separate records of such funds and expenditures thereof for the Costs associated with the Coachella Canal Lining Project, in accordance with generally accepted accounting practices. Should the audit

reveal that the San Luis Rey Settlement Parties and/or SDCWA paid an amount(s) greater than that which was proper, IID and/or CVWD shall refund within 30 days the difference between the amount paid and the proper amount, with accrued interest earned. Unless the San Luis Rey Settlement Parties and/or SDCWA challenge the expenditures within one Calendar Year after submittal of the records by IID and/or CVWD, respectively, the expenditures shall be deemed to have been accepted by the San Luis Rey Settlement Parties and/or SDCWA, respectively.

16.2 Limitation of Use of Funds. Funds provided by the San Luis Rey Settlement Parties and/or SDCWA under this Allocation Agreement shall not be used by IID and/or CVWD for negotiations with the San Luis Rey Settlement Parties and/or SDCWA or legal fees incurred by IID and/or CVWD to resolve disputes with the San Luis Rey Settlement Parties and/or SDCWA regarding interpretation or enforcement of this Allocation Agreement.

ARTICLE 17

Dispute Resolution

17.1 Informal Resolution. The Parties shall attempt to resolve any dispute relating to this Allocation Agreement through a meeting of the Parties. A Party requesting resolution of a dispute shall send written notice to all other Parties, which shall set forth in detail the position of the Party requesting resolution. Within 30 days of the notice being sent the Regional Director of Reclamation's Lower Colorado Region, the General Manager of SDCWA, the General Manager-Chief Engineer of CVWD, the General Manager of IID, the Utilities Director of Escondido, the General Manager of Vista, and the General Manager of the Indian Water Authority, and the Chairperson of

each of the Indian Bands, or each of their respective authorized representatives shall meet and attempt to resolve the dispute by a unanimous decision. In the event that all Parties' representatives are not present, a letter with the proposed action, signed by all the attending Parties' representatives, shall be sent to each absent Party's representative by certified mail, postage prepaid, return receipt requested. If no written protest from an absent Party's representative is sent to the other Parties within 30 days of the date of receipt of the letter with the proposed action, the decision shall be deemed unanimous and become final. Any written protest shall be mailed to each other Party's representative, and to each of the Parties by certified mail, postage prepaid, return receipt requested. Each Party shall bear its own expense for the dispute resolution process. Any resolution shall be in writing and be binding on the Parties. To the extent the dispute is not resolved by the Parties' representatives within 40 days of the conclusion of the dispute resolution meeting, the Parties shall try in good faith to settle the dispute in accordance with Section 17.2 herein before resorting to litigation.

17.2 Mediation. To the extent any dispute other than a dispute involving the determination of Costs to which the United States is not a party is not resolved by a meeting or following the meeting written communication among the Parties' representatives in accordance with Section 17.1 herein, the non-federal Parties shall try in good faith to settle the dispute by mediation under the Commercial Mediation Rules of the American Arbitration Association, each party to bear its own costs.

17.3 Arbitration. Any dispute to which the United States is not a party involving the determination of Costs shall be submitted to binding arbitration under the Commercial Arbitration Rules of the American Arbitration Association except as

otherwise provided herein if not resolved under Section 17.1 herein, each party to bear its own costs. Any dispute involving MWD's or SDCWA's determination that IID's election under Section 9.2.5 would result in Effects on MWD shall be submitted to binding arbitration under the Commercial Arbitration Rules of the American Arbitration Association Expedited Procedures. Judgment upon the award rendered by the arbitrators (arbitrator in Expedited Procedures) may be entered in any court having jurisdiction thereof.

17.3.1 Positions on Issues. Within 15 days after receipt of a notice for request for arbitration, MWD or SDCWA (if the dispute involves Effects on MWD), the San Luis Rey Settlement Parties, CVWD (if the dispute involves the Costs for the Coachella Canal Lining Project), IID (if the dispute involves Costs for the Coachella Canal Lining Project which IID is obligated to pay or has paid), and IID (if the dispute involves the Costs for the All-American Canal Lining Project) shall endeavor to agree such that only two positions on each issue exist. They shall endeavor to align themselves into two groups according to the positions taken on each issue. Each group shall select one person to act as arbitrator within 45 days after the receipt of a notice for request for arbitration. If they are unable to align themselves into two groups, the two arbitrators shall be selected pursuant to the Commercial Arbitration Rules within 60 days after the receipt of a notice of request for arbitration. On each issue to be resolved, each of the two groups shall, within 75 days after the receipt of a notice of request for arbitration select one arbitrator and shall notify the other group in writing of its selection. The two arbitrators so selected shall select a third arbitrator within 30 days following the selection of the last of the two arbitrators. If the arbitrators selected by the groups are unable or

fail to agree upon a third arbitrator, the American Arbitration Association shall select the third arbitrator. The third arbitrator shall act as chairperson of the arbitration panel and shall be independent from all Parties, having no past, present, or pending relationship with any of the Parties unless unanimously consented thereto by the Parties to the dispute.

17.3.2 Arbitration Limitation The arbitration shall be limited to the consideration and resolution of the issue(s) submitted. For arbitration regarding Effects on MWD, the arbitrator shall rely only on the documentation submitted by MWD, SDCWA and IID regarding Effects on MWD in reaching a decision. The panel of arbitrators, or in the case of arbitration regarding Effects on MWD the arbitrator, shall not rewrite, change, or amend this Allocation Agreement.

17.3.3 Award of Arbitrators and Allocation of Expenses of Arbitration
Except for Arbitration Regarding Effects on MWD. The award of the arbitrators shall be in writing, shall be accompanied by a reasoned opinion, shall be signed by at least two of the arbitrators, and shall be rendered within 30 days after the arbitration hearing. Each party shall bear the expense of its own counsel, experts, witnesses, and preparation and presentation of evidence. The administrative fees of arbitration and arbitrators' fees shall be borne 50 percent by the respective district, SDCWA or IID, which is obligated to pay or has paid the Costs which are the subject of the arbitration, 33 1/3 percent by CVWD—if the dispute involves the Costs for the Coachella Canal Lining Project, 33 1/3 percent by IID—if the dispute involves the Costs for the All-American Canal Lining Project, and 17 percent by the San Luis Rey Settlement Parties.

17.3.4 Award of Arbitrator and Allocation of Expenses of Arbitration

Regarding Effects on MWD. The award of the arbitrator shall be in writing, shall be accompanied by a reasoned opinion, shall be signed by the arbitrator, and shall be rendered within 14 days after the arbitration hearing. Each party shall bear its own expenses. The administrative fees of arbitration and arbitrator's fees shall be borne 50 percent by SDCWA and 50 percent by IID.

17.4 Disputes Involving the United States. Disputes under this Allocation Agreement involving the United States shall be presented first to the Regional Director of the Lower Colorado Region of the Bureau of Reclamation. The Regional Director shall be deemed to have denied the other Party's or Parties' contention(s) or claim(s) if the Regional Director does not act upon those contention(s) or claim(s) within 30 days of their having been presented. The decision of the Regional Director shall be subject to appeal to the Commissioner by a notice of appeal accompanied by a statement of reasons filed with the Commissioner within 30 days after such decision. The Commissioner shall be deemed to have denied the appeal if the Commissioner does not act upon the appeal within 30 days of filing. The decision of the Commissioner shall be subject to appeal to the Secretary by a notice of appeal accompanied by a statement of reasons filed with the Secretary within 30 days after such decision. The Secretary shall be deemed to have denied the appeal if the Secretary does not act upon the appeal within 30 days of filing. The decision of the Secretary may then be appealed to the federal courts to the extent permitted by and in accordance with federal law.

ARTICLE 18

Counting Days

Days shall be counted by excluding the first day and including the last day, unless the last day is not a business day, and then it shall be excluded. Any act required by this Allocation Agreement to be performed by a certain day shall be timely performed if it is completed before 5:00 p.m. Pacific Time on that date, unless otherwise specified. If the day for performing any obligation under this Allocation Agreement is not a business day, then the time for performing that obligation shall be extended to 5:00 p.m. Pacific Time on the next business day.

ARTICLE 19

Liability and Indemnity

19.1 Liability. No Party to this Allocation Agreement nor any of its directors, officers, agents, employees or authorized volunteers shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by any other Party to this Allocation Agreement in connection with any work, obligation, authority, or any criteria arising out of this Allocation Agreement.

19.2 Indemnity. Each non-federal Party to this Allocation Agreement shall defend, indemnify, and hold each other Party to this Allocation Agreement, its directors, officers, agents, employees and authorized volunteers, harmless against all liability, claims, or other loss, and whether direct, or indirect or consequential, which may occur as a result of activities conducted by it under this Allocation Agreement, together with reasonable attorney's fees and costs and expenses incurred by a Party in negotiating, settling, defending, or otherwise protecting against such liability, claims, and loss.

ARTICLE 20

Non-waiver

None of the provisions of this Allocation Agreement shall be considered waived by any Party, except when such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Allocation Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or its relinquishment of any such rights for the future, but such provisions and rights shall continue and remain in full force and effect.

ARTICLE 21

No Third-party Rights

This Allocation Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns. Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Allocation Agreement.

ARTICLE 22

Uncontrollable Forces

None of the Parties shall be considered to be in default in respect to any obligation hereunder, if prevented from fulfilling such obligation by reason of an Uncontrollable Force. Any Party rendered unable to fulfill any obligation by reason of an Uncontrollable Force shall give prompt written notice of such fact to the Party to whom the obligation is owed and shall exercise due diligence to remove such inability with all reasonable dispatch.

ARTICLE 23

Remedies Cumulative

The Parties do not intend that any right or remedy available to a Party on the breach of any provision under this Allocation Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedies provided in this Allocation Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delays in exercising any such right or remedy, the non-breaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power or privilege precludes any other or further exercise of a right, power or privilege granted by this Allocation Agreement or otherwise.

ARTICLE 24

General Settlement Provisions; No Admission of Settlement Terms;

Reservation of Rights and Claims

IID, CVWD, and MWD do not agree on the nature or scope of their relative rights to the delivery, use, or transfer of Colorado River water. IID, CVWD, MWD and SDCWA acknowledge that this Allocation Agreement is, in fact, a settlement and thus may not be used for any purpose in any judicial, legislative or administrative proceeding, and may not be used by IID, CVWD, MWD or SDCWA in any future attempt to reallocate water rights or to reorder the priorities of IID, CVWD, and/or MWD upon the termination of the Quantification Settlement Agreement. Subject to the provisions of this Allocation Agreement which compromise such matters, the legal rights, duties, obligations, powers and claims of each Party are preserved and may be acted upon by any Party during the term of this Allocation Agreement.

ARTICLE 25

Representations and Warranties

25.1 Legal Power and Authority. Each Party warrants that it has the authority to enter into this Allocation Agreement and to perform its obligations hereunder and that the person executing this Allocation Agreement on behalf of that Party has the authority to do so.

25.2 Valid and Binding Agreement. This Allocation Agreement constitutes a valid and binding agreement of each Party, enforceable against each Party in accordance with its terms.

ARTICLE 26

Governing Law

This Allocation Agreement shall be interpreted, governed by and construed under the laws of the State and any applicable Federal law, including Public Law 100-675 as amended. In case of conflict between Federal and State law, Federal law controls.

ARTICLE 27

Binding Effect

This Allocation Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities.

ARTICLE 28

Interrelationship with Existing Agreements

Existing contracts and agreements entered into by the Secretary for the delivery of Colorado River water shall remain in full force and effect in accordance with their terms

and, with this Allocation Agreement, shall govern the delivery and use of Colorado River water allocated as a result of the Projects. Neither the Secretary nor the San Luis Rey Settlement Parties are party to the Quantification Settlement Agreement, and the rights and responsibilities of the Secretary and the San Luis Rey Settlement Parties with respect to the allocation of water conserved by the All American Canal Lining Project and the Coachella Canal Lining Project are as set forth in this Allocation Agreement and are not affected by the Quantification Settlement Agreement.

ARTICLE 29

Modification

This Allocation Agreement may be supplemented, amended, or modified only by the written agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by all Parties.

ARTICLE 30

Ambiguities

Each Party and its counsel have participated fully in the drafting, review and revision of this Allocation Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Allocation Agreement, including any amendments or modifications.

ARTICLE 31

Authorized Representatives

Each Party shall designate an authorized representative in writing within 30 days following the execution of this Allocation Agreement. The authorized representatives

cc: Bureau of Reclamation
Lower Colorado Region
Attention: Regional Director
P.O. Box 61470
Boulder City, NV 89006-1470

Bureau of Reclamation
Yuma Area Office
Attention: Area Manager
7301 Calle Agua Salada
Yuma, AZ 85365

If to MWD:
by personal service or
overnight delivery:

The Metropolitan Water District
of Southern California
Attention: Chief Executive Officer
700 North Alameda Street
Los Angeles, California 90012-2944

by U.S. mail:

P.O. Box 54153
Los Angeles, California 90054-0153

If to CVWD:
by personal service or
overnight delivery:

Coachella Valley Water District
Attention: General Manager-Chief
Engineer
Highway 111 and Avenue 52
Coachella, California 92236

by U.S. mail:

P.O. Box 1058
Coachella, California 92236

If to IID:
by personal service or
overnight delivery:

Imperial Irrigation District
Attention: General Manager
333 E. Barioni Boulevard
Imperial, California 92251

by U.S. mail:

P.O. Box 937
Imperial, California 92251

cc: John P. Carter, Esq.
Horton, Knox, Carter & Foote
895 Broadway
Suite 101
El Centro, CA 92243

If to SDCWA San Diego County Water Authority

Attention: General Manager
4677 Overland Avenue
San Diego, CA 92123

If to the City of Escondido: City of Escondido
Attention: City Manager
Civic Center Plaza
201 North Broadway
Escondido, California 92025

If to Vista Irrigation District: Vista Irrigation District
Attention: General Manager
1391 Engineer Street
Vista, California 92081

If to San Luis Rey River
Indian Water Authority: San Luis Rey River Indian Water
Authority
Attention: General Manager
P. O. Box 428
1010 Pauma Reservation Road
Pauma Valley, California 92061

If to La Jolla Band
Of Mission Indians: La Jolla Band of Mission Indians
Attention: Chairperson
Star Route 158
22000 Highway 76
Valley Center, CA 92082

If to Pala Band
of Mission Indians: Pala Band of Mission Indians
Attention: Chairperson
P.O. Box 43
35955 Pala Temecula Road
Pala, CA 92059-0043

If to Pauma Band
of Mission Indians:

Pauma Band of Mission Indians
Attention: Chairperson
P.O. Box 369
1010 Pauma Reservation Road
Pauma Valley, California 92061

If to Rincon Band
of Mission Indians

Rincon Band of Mission Indians
Attention: Chairperson
P.O. Box 68
33750 Valley Center Road
Valley Center, CA 92082

If to San Pasqual Band
of Mission Indians:

San Pasqual Band of Mission Indians
Attention: Chairperson
P.O. Box 365
27458 North Lake Wohlford Road
Valley Center, California 92082

32.2 Refused, Unclaimed or Undeliverable Notices. A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

32.3 Change of Address. Any Party or entity may change its address for notice by written notice given to the other in the manner provided in Section 32.1 herein.

ARTICLE 33

Judicial Remedies Not Foreclosed

Except as provided in Article 17 of this Allocation Agreement nothing herein shall be construed (1) as depriving any Party from pursuing and prosecuting any remedy in any appropriate court of the United States or the State which would otherwise be

available to such Party, or (2) as depriving any Party of any defense thereto which would otherwise be available.

ARTICLE 34

Availability of Information

All information and data obtained or developed with the performance of duties mentioned in this Allocation Agreement shall be available upon request to a Party, except where prohibited by law. However, use of said reports, data and information shall appropriately reference the source for the respective documents.

ARTICLE 35

Time of the Essence

Time is of the essence of and under this Allocation Agreement and of every provision thereof.

ARTICLE 36

Relation to Reclamation Law

Pursuant to Section 209 of Title II, this Allocation Agreement shall not be deemed to be a new or amended contract for the purpose of Section 203(a) of the Reclamation Reform Act of 1982 (Public Law 97-293, 93 Stat. 1263).

ARTICLE 37

Counterparts

This Allocation Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

ARTICLE 38

Additional Parties

38.1 Additional Parties. The Parties agree that after the initial execution of this Allocation Agreement that additional entities may become Parties to this Allocation Agreement in the manner set forth in this Article 38.

38.2 PVID. PVID may become a Party to this Allocation Agreement by adopting a resolution giving PVID's consent to the delivery of water available for allocation as a result of the Projects in accordance with the terms of this Allocation Agreement and acknowledgment of the Costs associated with that water and delivering certified copies of the resolution in a quantity commensurate with the number of then existing Parties to the Secretary. Upon receipt of these documents by the Secretary, PVID shall be deemed a Party to this Allocation Agreement and bound by its terms. The Secretary shall promptly distribute the certified copies to all then existing Parties to the Allocation Agreement.

ARTICLE 39

Obligations of United States

All obligations of the United States under this Allocation Agreement are subject to the availability of appropriations made by the Congress.

IN WITNESS THEREOF, the Parties have hereunto set their hands on the date first above written.

THE UNITED STATES OF AMERICA

By: Gale A. Norton

Approved as to form:
By: W. F. [Signature]

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

By: [Signature]
Chief Executive Officer

Approved as to form:
By: [Signature]

COACHELLA VALLEY WATER DISTRICT

By: [Signature]
General Manager-Chief Engineer

Approved as to form:
By: [Signature]

IMPERIAL IRRIGATION DISTRICT

By: [Signature]
General Manager

Approved as to form:
By: [Signature]

SAN DIEGO COUNTY WATER AUTHORITY

By: [Signature]
General Manager

Approved as to form:

By: [Signature]

CITY OF ESCONDIDO

By: [Signature]
Mayor

By: [Signature] Deputy
City Clerk

Approved as to form:

By: [Signature]

VISTA IRRIGATION DISTRICT

By: [Signature]
General Manager

By: [Signature]
President, Board of Directors

Approved as to form:

By: [Signature]

SAN LUIS REY RIVER INDIAN WATER AUTHORITY

By: [Signature]
General Manager Vice President 12/91

Approved as to form:

By: [Signature]

LA JOLLA BAND OF MISSION INDIANS

By: [Signature] Chairperson

Approved as to form:
By: [Signature]

PALA BAND OF MISSION INDIANS

By: [Signature] Chairperson

Approved as to form:
By: [Signature]

PAUMA BAND OF MISSION INDIANS

By: [Signature] Chairperson

Approved as to form:
By: [Signature]

RINCON BAND OF MISSION INDIANS

By: [Signature] Chairperson

Approved as to form:
By: [Signature]

SAN PASQUAL BAND OF MISSION INDIANS

By: [Signature] Chairperson

Approved as to form:
By: [Signature]

EXHIBIT A

Amount of Water Conserved by Lining Each of the
Reaches of the All-American Canal and Coachella Canal

Water Available for Allocation as a Result of All-American Canal Lining Project

Present seepage and estimated yield based on Table III-1 and Table III-2 of the March 1994 All American Canal Lining Project Final Environmental Impact Statement/Environmental Impact Report

(acre-feet per Calendar Year)

Canal Reach	Present Seepage	Lined Leakage	Reduced Evaporation	Other Adjustments*	Water Yield
Rock Section 2 to Drop 1	59,200	9,200	(850)	0	50,850
Drop 1 to Drop 2	17,900	3,500	(300)	0	14,700
Drop 2 to Drop 3	7,400	3,600	(350)	(2,000)	2,150
	84,500	16,300	(1,500)	(2,000)	67,700

*Estimated amount of All-American Canal Lining Project-induced seepage below Drop 3.

Should one or more reaches be substantially completed on a date other than on December 31 of a Calendar Year, the amount of All-American Canal Lining Project Conserved Water which will result for the remainder of that Calendar Year will be determined by calculating the ratio of the remaining amount of water projected to flow in the All-American Canal past Pilot Knob for that Calendar Year to the amount of water which has flowed in the All-American Canal past Pilot Knob for that Calendar Year as of the date of transfer to operation status plus the remaining amount of water projected to flow in the All-American Canal past Pilot Knob for the remainder of that Calendar Year and multiplying that ratio by the Water Yield.

Water Available for Allocation as a Result of Coachella Canal Lining Project

Seepage by Reach and Reduction per December 1993 Draft Environmental Impact Statement/Report (EIS/EIR) as modified by the September 2000 Draft EIS/EIR [1]

(acre-feet per Calendar Year)

Siphon to Siphon Reach	Reach Length (feet)	Reach Seepage	Reach Lining Leakage	Reach Net Seepage Reduction
7-8	4,391.00	137	14	123
8-9	7,263.00	226	23	203
9-10	6,588.80	205	22	183
10-11	4,413.08	137	14	123
11-12	8,157.90	253	26	227
12-13	10,696.00	332	34	298
13-14	6,125.99	190	19	171
Unit A	47,635.77	1,480	150	1,330
Subtotal				
[2] 14-15	7,569.00	643	34	609
15-16	8,913.00	757	40	717
16-17	7,152.80	607	32	575
17-18	7,458.90	633	34	599
Unit B	31,093.70	2,640	140	2,500
Subtotal				
18-19	5,617.20	1,659	81	1,578
19-20	6,508.00	1,923	95	1,828
20-21	5,797.00	1,713	84	1,629
21-22	8,652.00	2,556	125	2,431
22-23	12,048.29	3,559	175	3,384
Unit C	38,622.49	11,410	560	10,850
Subtotal				
23-24	14,165.58	5,215	196	5,019
24-25	5,379.08	1,980	75	1,905
25-26	7,938.00	2,922	110	2,812
26-27	4,657.00	1,715	64	1,651
27-28	2,321.00	855	32	823
[3] 28-29+	10,357.00	3,813	143	3,670
Unit D	44,817.66	16,500	620	15,880
Subtotal				
[3] 29+-30	11,862.53	184	17	167

30-31	6,498.00	100	10	90
31-32	2,313.00	36	3	33
Unit E	20,673.53	320	30	290
Subtotal				
Total	182,843.15	32,350	1,500	30,850

[1] The total estimated seepage reported in the 1993 and 2000 Draft EIS/EIRs are the same. Estimated seepage per Hydrological Unit from Table III-1 of the 1993 Draft EIS/EIR. Estimated Reach Lining Leakage from 1993 Draft EIS/EIR adjusted by adding an additional 10 acre-feet to Hydrologic Unit A in order for total leakage to equal 1,500 acre-feet as reported in the September 2000 Draft EIS/EIR. Distribution of hydrologic unit subtotals among the siphon defined reaches estimated by MWD.

[2] Completed in March 1991, the reach between Siphons 14 and 15 was lined in-place with concrete. Seepage from this reach is included in the totals.

[3] The hydrological subunit from Siphons 23 to 29 actually ends 2,500 feet downstream of Siphon 29.

Should one or more reaches be substantially completed on a date other than on December 31 of a Calendar Year, the amount of water which will result for the remainder of that Calendar Year will be determined by calculating the ratio of the remaining amount of water projected to flow in the Coachella Canal past Siphon 7 for that Calendar Year to the amount of water which has flowed in the Coachella Canal past Siphon 7 for that Calendar Year as of the date of transfer to operation status plus the remaining amount of water projected to flow in the All-American Canal past Pilot Knob for the remainder of that Calendar Year and multiplying that ratio by the Reach Net Seepage Reduction.

EXHIBIT B

Capital Cost Payments

If any part of the water available for allocation as a result of the Project or Projects is proposed to be used by IID following termination of the Quantification Settlement Agreement, then, pursuant to Section 9.6.3 of this Allocation Agreement, IID shall reimburse SDCWA an amount of money determined by the following formula:

$$R = (A/CW) \times [CRF \times (C + O)]$$

Where,

R = The annual Payment payable to SDCWA by IID for use of water available for allocation as a result of the Project or Projects in a particular Calendar Year. The annual Payment is not associated with an amortization period.

A = The amount of water available for allocation as a result of the Project or Projects used by IID during the particular Calendar Year.

CW = The total amount of water available for allocation as a result of the Project or Projects during the particular Calendar Year.

CRF = Annualized capital recovery factor for 55 Calendar Years using a defined interest rate equal to: (1) the weighted average true interest cost of:

- all State bonds issued during the design and construction of the Project or Projects if State bond funds are utilized for financing design or construction of the Project or Projects,
- all SDCWA bonds issued during the design and construction of the Project or Projects if SDCWA bond funds are utilized for financing design or construction of the Project or Projects,
- all CVWD bonds issued during the design and construction of the Project or Projects if CVWD bond funds are utilized for financing design or construction of the Project or Projects, and
- all IID bonds issued during the design and construction of the Project or Projects if IID bond funds are utilized for financing design or construction of the Project or Projects; or

(2) if no such bonds are issued during such period of time, then said interest costs shall be the respective interest cost on the most recent bond issue by SDCWA prior to said period.

C = the actual capital cost of the Project or Projects including payments made pursuant to Article 6 of this Allocation Agreement; environmental documentation costs; actual planning, design, and construction costs of the features for the Project or Projects; and any other actual expenditures that are associated with the capital element of the

Project or Projects. Said actual capital cost of the Project or Projects shall be determined by the AAC Committee for the All-American Canal Lining Project and by the CC Committee for the Coachella Canal Lining Project using sound engineering and economic practices.

O = any costs not included in the determination of C above that are proper costs such as interest on construction work in progress, and financing costs of bonds which are not included the determination of C above if bonds are issued during the design and construction of the Project or Projects that are to be amortized (Additional Amortized Cost).

An example calculation for reimbursement for use is attached hereto as Attachment I.

Attachment I

Example of Operation of Formula

Assumptions

1. Capital Costs (C) \$ 4,000,000 Year -- (-5)
21,000,000 Year -- (-4)
25,000,000 Year -- (-3)
25,000,000 Year -- (-2)
25,000,000 Year -- (-1) (Project completed)
\$100,000,000 total
2. Additional
Amortized Cost (O) \$20,000,000
3. Conserved Water (CW) 67,700 acre-feet per Calendar Year
4. Water Used by IID 20,000 acre-feet in Year 80
5. Defined Interest Rate 5 percent

Calculation of Capital Cost Payment in Year 80 by IID Assuming Bond Funds are Utilized for Design or Construction of the Project

$$A = 20,000$$

$$CW = 67,700$$

$$\begin{aligned} R &= (A/CW) \times [CRF \times (C + O)] \\ &= (20,000/67,700) \times [0.0537 \times (100,000,000 + 20,000,000)] \\ &= \$1,903,693 \end{aligned}$$

DUPLICATE ORIGINAL

Amendatory Contract No. 8-07-30-W0007
Amendment No. 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

AMENDMENT TO
AMENDATORY CONTRACT BETWEEN THE UNITED STATES OF AMERICA
AND COACHELLA VALLEY WATER DISTRICT FOR
REPLACING A PORTION OF THE COACHELLA CANAL

1. THIS AMENDMENT dated October 10, 2003, to Amendatory Contract No. 8-07-30-W0007, dated March 14, 1978 (hereinafter called the "Canal Replacement Contract") is between the UNITED STATES OF AMERICA and COACHELLA VALLEY WATER DISTRICT.

2. The parties hereto desire to conform the Canal Replacement Contract to the provisions of Section 210 of the San Luis Rey Indian Water Rights Settlement Act (Public Law 100-675; 102 Stat. 4000 et seq., as amended).

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties hereto agree as follows:

3. Article 14(b) of the Canal Replacement Contract is amended to read:
"(b) The construction charge obligation shall be repayable without interest by the United States and the District in 40 equal annual installments over a period of 40 years beginning in the year after construction is completed as determined by the Contracting Officer, and the Contractor is so notified by the United States. The portion of the construction charge obligation

allocated to the United States, which shall be non-reimbursable, will be that portion of the total cost determined by the ratio of the number of months in the interim period (as defined in the Colorado River Basin Salinity Control Act or any amendment thereof) divided by the number of months in the repayment period (40 x 12 or 480). The Contracting Officer will notify the Contractor as to the amount of each annual repayment installment and the year the interim period ends. All annual repayment installments of the construction charge obligation after the end of the interim period shall be the obligation of the Contractor, provided, that during the period of planning, design, and construction of the works authorized by Title II of the San Luis Rey Indian Water Rights Settlement Act and during the period that the Indian Water Authority and the local entities (as defined in Section 102 of the San Luis Rey Indian Water Rights Settlement Act) receive up to 16,000 acre-feet of the water conserved by the works, the annual repayment installments shall be non-reimbursable. The Contractor's first annual repayment installment of the construction charge obligation shall be due on the first October 1 after the Contracting Officer has notified the Contractor that the interim period has ended and that the annual repayment installments are no longer non-reimbursable, and each subsequent annual repayment installment shall be due and payable by the Contractor to the United States on October 1 of each following year."

4. Except as expressly modified herein, the Canal Replacement Contract and the amendment thereto shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to
Amendatory Contract No. 8-07-30-W0007.

Approved for Legal Sufficiency

By: Katherine C. Vercara

THE UNITED STATES OF AMERICA

By: [Signature]

COACHELLA VALLEY WATER DISTRICT

By: [Signature]

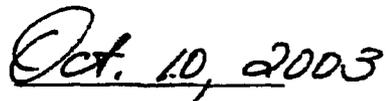


THE SECRETARY OF THE INTERIOR
WASHINGTON

**Colorado River Water Delivery Agreement:
Federal Quantification Settlement Agreement**
for purposes of Section 5(B) of
Interim Surplus Guidelines

Approved:


Gale A. Norton
Secretary of the Interior


Date

COLORADO RIVER WATER DELIVERY AGREEMENT

The United States by and through the Secretary of the Interior (Secretary) hereby enters into this Colorado River Water Delivery Agreement (Agreement) with the Imperial Irrigation District (IID), the Coachella Valley Water District (CVWD), The Metropolitan Water District of Southern California (MWD) (these three districts are collectively referred to herein as the Districts), and the San Diego County Water Authority (SDCWA). The Secretary, IID, CVWD, MWD and SDCWA hereby agree as follows:

RECITALS

- A. By regulations dated September 28, 1931, the Secretary incorporated the schedule of priorities provided in the Seven Party Agreement dated August 18, 1931, and established priorities One through Seven for use of the waters of the Colorado River within the State of California. The regulations were promulgated pursuant to the Boulder Canyon Project Act (BCPA) and required that contracts be entered into for the delivery of water within those priorities.
- B. The Secretary has entered into contracts with, among others, the Palo Verde Irrigation District (PVID), IID, CVWD, and MWD, for the delivery of Colorado River water pursuant to Section 5 of the BCPA (Section 5 Contracts). Under those Section 5 Contracts, PVID, IID, CVWD and MWD have certain rights to the delivery of Colorado River water, which for PVID and IID include the satisfaction of present perfected rights in accordance with Section 6 of the BCPA. MWD and CVWD also have surplus water delivery contracts with the Secretary.
- C. IID, CVWD, MWD and SDCWA have entered into agreements relating to, among other matters, their respective beneficial consumptive use of Colorado River water and desire that, for the term of this Agreement, Colorado River water be delivered by the Secretary in the manner contemplated in this Agreement.
- D. The Secretary has the authority to enter into this Agreement on behalf of the United States pursuant to the BCPA, the 1964 Decree in Arizona v. California, and other applicable authorities.

OPERATIVE TERMS

1. WATER DELIVERY CONTRACTS

- a. Priorities 1, 2, 3(b), 6(b), and 7 of current Section 5 Contracts for the delivery of Colorado River water in the State of California and Indian and miscellaneous Present Perfected Rights (PPRs) within the State of California and other existing surplus water contracts are not affected by this Agreement.

- b. The Secretary agrees to deliver Colorado River water in the manner set forth in this Agreement during the term of this Agreement. The Secretary shall cease delivering water pursuant to this Agreement at the end of the term of this Agreement; provided, however, that the Secretary's delivery commitment to the San Luis Rey Indian Water Rights Settlement Parties (SLR) shall not terminate at the end of the term but shall instead continue, pursuant to Section 106 of Public Law 100-675, 102 Stat. 4000 et seq., as amended, subject to the terms and conditions of any applicable agreement to which the Secretary is a party concerning the allocation of water to be conserved from the lining of the All-American and Coachella Canals.
- c. The Districts' respective Section 5 Contracts shall remain in full force and effect and, with this Agreement, shall govern the delivery of Colorado River water.

2. QUANTIFICATION OF PRIORITY 3(a)

- a. Except as otherwise determined under the Inadvertent Overrun and Payback Policy identified in Section 9 of this Agreement, the Secretary shall deliver Priority 3(a) Colorado River water to IID in an amount up to but not more than a consumptive use amount of 3.1 million acre-feet per year (AFY) less the amount of water equal to that to be delivered by the Secretary for the benefit of CVWD, MWD, SDCWA, SLR, and Indian and miscellaneous PPRs as set forth in Exhibits A and B hereto. Colorado River water acquired by IID after the date of this Agreement, and where necessary approved by the Secretary, shall not count against this cap.
- b. Except as otherwise determined under the Inadvertent Overrun and Payback Policy, the Secretary shall deliver Priority 3(a) Colorado River water to CVWD in an amount up to but not more than a consumptive use amount of 330,000 AFY less the amount of water equal to that to be delivered by the Secretary for the benefit of IID, MWD, SDCWA, SLR, and Indian and miscellaneous PPRs as set forth in Exhibits A and B hereto. Colorado River water acquired by CVWD in any transaction to the extent agreed upon prior to or concurrent with the execution of this Agreement by IID and MWD and, where necessary approved by the Secretary, shall not count against this cap.

3. QUANTIFICATION OF PRIORITY 6(a)

- a. Subject to any rights that PVID may have, and except as otherwise provided under the Interim Surplus Guidelines, or under the agreements contemplated by those guidelines, the Secretary shall deliver Priority 6(a) water to MWD, IID and CVWD in the following order and consumptive use volumes: (i) 38,000 AFY to MWD; (ii) 63,000 AFY to IID; and (iii) 119,000 AFY to CVWD, or as those parties may agree to occasionally forbear.
- b. Any water not used by MWD, IID or CVWD as set forth above will be available to satisfy the next listed amount in Section 3.a. above. Any additional water available for Priority 6(a) shall

be delivered by the Secretary in accordance with IID and CVWD's entitlements under their respective Section 5 Contracts in effect as of the date of this Agreement.

4. TRANSFERS AND OTHER WATER DELIVERY COMMITMENTS

- a. The Secretary shall deliver IID's Priority 3(a) entitlement for the benefit of IID and others as specified in Exhibits A and B hereto and in the amounts and to the points of delivery set forth therein.
- b. The Secretary shall deliver CVWD's Priority 3(a) entitlement for the benefit of the CVWD and others as specified in Exhibits A and B hereto and in the amounts and to the points of delivery set forth therein.
- c. At SDCWA's election, the Secretary shall deliver water made available for SDCWA's benefit as set forth in Exhibits A and B hereto to the intake facilities for the Colorado River Aqueduct and SDCWA may then exchange up to 277,700 AFY of Colorado River water with MWD at Lake Havasu.
- d. If in any given calendar year that the use of Colorado River water in accordance with Priorities 1 and 2, together with the use of Colorado River water on PVID Mesa lands in accordance with Priority 3(b), exceeds the consumptive use amount of 420,000 AFY, the Secretary will reduce the amount of water otherwise available to MWD in Priorities 4, 5 or 6(a) by the amount that such use exceeds 420,000 AFY. To the extent that the amount of water used in accordance with Priorities 1, 2 and 3(b) is less than 420,000 AFY, the Secretary shall deliver to MWD the difference.
- e.
 1. The Secretary shall deliver to CVWD at Imperial Dam the consumptive use amount of 20,000 AFY or such lesser consumptive use amount as may be requested by CVWD of Priority 3(a) Colorado River water made available to MWD under the Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water between IID and MWD dated December 22, 1988, as amended.
 2. Beginning in 2048 and in each year thereafter, the Secretary shall deliver to CVWD at Imperial Dam the consumptive use amount of 50,000 AFY or such lesser consumptive use amount as may be requested by CVWD from the Colorado River water available to MWD.
 3. When requested by MWD for the purpose of satisfying an exchange obligation to CVWD under an agreement between CVWD and MWD for exchange of CVWD's State Water Project water, the Secretary shall deliver to CVWD at Imperial Dam the consumptive use amount of 135,000 AFY or such lesser amount as may be requested by MWD.

- f. CVWD may decline to take a portion of the water to be conserved by IID for CVWD. In this event, the Secretary shall instead deliver such portion of the water to IID or MWD, or to other unspecified water users provided, further, that any such delivery to an unspecified user is, where necessary, subject to Secretarial approval.
- g. Colorado River water will be made available to MWD through forbearance under the existing priority system as a result of a proposed land management program between PVID landowners and MWD. Neither IID nor CVWD will make any claim to or object to delivery to MWD of PVID program water to the extent agreed upon prior to or concurrent with the execution of this Agreement by IID and CVWD. If the transfer of PVID program water is not implemented, then IID has agreed to transfer for the benefit of MWD/SDCWA amounts necessary to meet the minimum Benchmark Quantities as set forth in Section 5(C) of the Interim Surplus Guidelines, not to exceed 145,000 AF in the aggregate.
- h. CVWD may utilize Colorado River water outside of Improvement District No. 1 to the extent consented to and agreed upon prior to or concurrent with the execution of this Agreement by IID and MWD.
- i. Notwithstanding the transfers set forth in this section and Exhibit B, IID, CVWD, MWD and SDCWA recognize and agree that at the conclusion of the effective period of the Interim Surplus Guidelines, they shall have implemented sufficient measures to be able to limit total uses of Colorado River water within California to 4.4 million AFY, unless the Secretary determines a surplus under a 70R strategy.

5. SHORTAGES

- a. The Secretary's authority under II.B.3 of the 1964 Decree in Arizona v. California is not limited in any way by this Agreement.
- b. If for any reason there is less than 3.85 million AFY available under Priorities 1, 2 and 3 during the term of this Agreement, any water which is made available by the Secretary to IID and CVWD shall be delivered to IID, CVWD, MWD, and SDCWA in accordance with the shortage sharing provisions agreed upon prior to or concurrent with the execution of this Agreement by IID, CVWD, MWD and SDCWA.

6. TERM

- a. This Agreement will become effective upon execution of this Agreement by all Parties.
- b. This Agreement will terminate on December 31, 2037, if the 1998 IID/SDCWA transfer program terminates in that year.

- c. If this Agreement does not terminate on December 31, 2037, then this Agreement will terminate on December 31, 2047 unless extended by agreement of all parties until December 31, 2077, in which case this Agreement will terminate on December 31, 2077.
- d. The Secretary's delivery commitment to the SLR and the Districts' recognition and acceptance of that delivery commitment, shall not terminate but shall instead continue, pursuant to Section 106 of Public Law 100-675, 102 Stat. 4000 et seq., as amended.

7. INTERIM SURPLUS GUIDELINES

The Secretary finds that execution of this Agreement constitutes "all required actions" that the relevant California Colorado River water contractors are required to undertake pursuant to Section 5(B) of the Interim Surplus Guidelines. Accordingly, upon execution of this Agreement by all parties, the interim surplus determinations under Sections 2(B)(1) and 2(B)(2) of the Interim Surplus Guidelines are reinstated.

8. BENCHMARKS FOR THE STATE OF CALIFORNIA'S AGRICULTURAL USE

- a. The parties to this Agreement agree to carry out the transfers identified in Section 4 above and in Exhibit A hereto in accordance with the schedule set forth in Exhibit B hereto. Nothing in this Agreement authorizes or precludes carrying out the transfers on a timetable sooner than provided in the schedule set forth in Exhibit B hereto. The transfers in the schedule set forth in Exhibit B hereto are undertaken to allow California agricultural usage (by PVID, Yuma Project Reservation Division, IID, and CVWD) plus 14,500 af of PPR use to be at or below the Benchmark Quantities as set forth in Section 5(C) of the Interim Surplus Guidelines. Nothing in this Agreement authorizes or precludes additional transfers of Colorado River water as agreed upon prior to or concurrent with the execution of this Agreement by the Districts to meet the Benchmark Quantities as set forth in Section 5(C) of the Interim Surplus Guidelines. All determinations by the Secretary with respect to this section shall be based upon Decree Accounting. Repayment of overrun amounts shall not count toward compliance with the transfers in the schedule set forth in Exhibit B hereto or toward compliance with the Benchmark Quantities set forth in Section 5(C) of the Interim Surplus Guidelines.
- b. In the event that i) the transfers are carried out as set forth in the schedule in Exhibit B hereto or additional Colorado River transfers as agreed upon prior to or concurrent with the execution of this Agreement by the Districts are carried out and ii) California's Agricultural usage plus 14,500 af of PPR use is at or below the Benchmark Quantities as set forth in Section 5(C) of the Interim Surplus Guidelines, the provisions of this subparagraph shall apply.
 - 1. Notwithstanding the provisions of the November 22, 2002 Supplement to the 2002 Annual Operating Plan, any existing overruns in calendar years 2001 and 2002 by parties to this Agreement must be repaid within an eight-year period beginning in calendar year 2004 in

accordance with the schedule attached in Exhibit C hereto, except that in the event that any Annual Operating Plan 24-Month Study indicates that a shortage will occur within months 13 through 24, any remaining balance of the 2001 and 2002 overruns shall be fully repaid during the next calendar year. Repayment of any overruns other than from calendar years 2001 and 2002 shall be pursuant to the Inadvertent Overrun and Payback Policy identified in Section 9 below.

2. The Secretary has considered the quantification of Priority 3(a) as set forth in Section 2 of this Agreement and the water transfers set forth in the schedule in Exhibit B hereto. These water transfers were developed to assist the Districts and SDCWA to meet the provisions of Section 4(i) of this Agreement and to reduce the occurrence of future reasonable and beneficial use reviews under 43 C.F.R. Pt. 417 to unique circumstances. These water transfers are based upon water conservation activities to be implemented over the term of this Agreement. For these reasons, the Secretary does not anticipate any further review of the reasonable and beneficial use of Colorado River water by IID pursuant to the annual 43 C.F.R. Pt. 417 reviews that are conducted during the initial term of this Agreement as set forth in Section 6.b. (December 31, 2037). Should the Secretary engage in any further review of the reasonable and beneficial use of Colorado River water by IID pursuant to 43 C.F.R. Pt. 417 under this Section, the Secretary will base her decision on (i) the purpose of the quantification of Priority 3(a) and the reductions and transfers set forth on Exhibit B hereto, and (ii) the implementation of the water transfers by IID as set forth in the schedule in Exhibit B, in addition to the consideration of the factors in 43 C.F.R. § 417.3

c. Notwithstanding any other provision of this Agreement, and in addition to any applicable provisions of the Interim Surplus Guidelines, in the event that either i) the transfers are not carried out as set forth in Exhibit B hereto or additional Colorado River transfers as agreed upon prior to or concurrent with the execution of this Agreement by the Districts are not carried out, or ii) California's Agricultural usage plus 14,500 af of PPR use is above the Benchmark Quantities as set forth in Section 5(C) of the Interim Surplus Guidelines, the provisions of this subparagraph shall apply.

1. For each District that has not implemented the water transfers to which it is a party upon the agreed upon schedule as set forth in Exhibit B hereto, the Inadvertent Overrun and Payback Policy identified in Section 9 below will be immediately suspended. During suspension of the Inadvertent Overrun and Payback Policy, for previously incurred overruns, the payback period shall be as provided in the existing Inadvertent Overrun and Payback Policy were such Policy not suspended. The Inadvertent Overrun and Payback Policy will be reinstated at such time as a District has implemented the water transfers to which it is a party upon the agreed upon schedule as set forth in Exhibit B hereto.

2. Any remaining existing overruns from calendar years 2001 and 2002 by parties to this Agreement must be repaid within a three-year period.

3. In addition to any applicable provisions of the Interim Surplus Guidelines, in the event that the transfers are not implemented in accordance with Column 23 in Exhibit B hereto, MWD shall not place any order to the Secretary for any Colorado River water otherwise available pursuant to sections 2(B)(1) and 2(B)(2) as set forth in the Interim Surplus Guidelines.

4. The Secretary anticipates that a further review of the reasonable and beneficial use of Colorado River water by the Districts will be required pursuant to the annual 43 C.F.R. Pt. 417 reviews that are conducted during the initial term of this Agreement as set forth in Section 6.b. (December 31, 2037). In any such review, the Secretary will base her decision on the factors set forth in Section 8.b.2 above as well as the basis for any District's non-implementation of the transfers set forth in Exhibit B hereto, in addition to the consideration of the factors in 43 C.F.R. § 417.3

9. INADVERTENT OVERRUN AND PAYBACK POLICY

For so long as the provisions of Section 8.b of this Agreement are applied, the Secretary will not materially modify the Inadvertent Overrun and Payback Policy for a 30-year period, absent extraordinary circumstances such as significant Colorado River infrastructure failures, and subject to the provisions of Section 5 of this Agreement. In the event that extraordinary circumstances arise, the Secretary will consult with the Districts and other interested parties before initiating any material change.

10. ADDITIONAL PROVISIONS

- a. Imperial Irrigation District v. United States of America, et al., CV 0069W (JFS) (D. Cal. filed January 10, 2003) (JFS), is dismissed pursuant to Stipulation under Fed. R. Civ. P. 41(a)(1). Nothing in this Agreement shall affect the preclusive and non-preclusive effects of the Stipulation during the term of this Agreement and thereafter.
- b. Upon dismissal of Imperial Irrigation District v. United States, et al., as provided in subsection 10(a) above, the Secretary will irrevocably terminate the *de novo* "Recommendations and Determinations Authorized by 43 C.F.R. Pt. 417, Imperial Irrigation District" for 2003, and IID's water order for 2003 is approved subject to the terms of this Agreement.
- c. 1. IID, CVWD, MWD, and SDCWA do not agree on the nature or scope of rights to the delivery, use or transfer of Colorado River water within the State of California. Furthermore, the Districts and SDCWA agree not to use this Agreement or any provision hereof, as precedence for purposes of evidence, negotiation or agreement on any issue of California or federal law in any administrative, judicial or legislative proceeding, including without limitation,

any attempt by IID and SDCWA to obtain further approval of any water transaction.

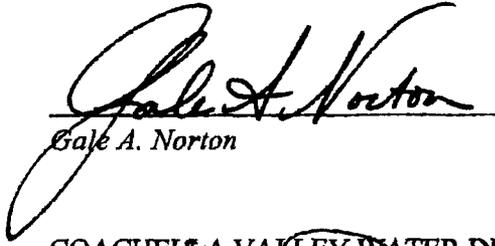
2. The terms of this Agreement do not control or apply to the nature or scope of rights to the delivery, use or transfer of Colorado River water within the State of California, except as those rights are defined and addressed in this Agreement during the term hereof.

3. By executing this Agreement, the Districts and SDCWA are not estopped from asserting in any administrative, judicial or legislative proceeding, including those involving the United States, that neither this Agreement nor any of its terms was necessary or required to effectuate the transactions contemplated herein.

4. Nothing herein waives the ability of any party to challenge the exercise of particular miscellaneous and Indian PPRs.

- d. This Agreement shall not be deemed to be a new or amended contract for the purpose of Section 203(a) of the Reclamation Reform Act of 1982 (Public Law 97-293, 93 Stat. 1263).
- e. This Agreement does not (i) guarantee or assure any water user a firm supply for any specified period, (ii) change or expand existing authorities under applicable federal law, except as specifically provided herein with respect to the Districts, (iii) address interstate distribution of water; (iv) change the apportionments made for use within individual States, (v) affect any right under the California Limitation Act (Act of March 4, 1929; Ch. 16, 48th Sess.), or any other provision of applicable federal law.
- f. This Agreement is not intended nor shall it be construed to create any third party beneficiary rights to enforce the terms of this Agreement in any person or entity that is not a party.
- g. Each party to this Agreement represents that the person executing this Agreement on behalf of such party has full power and authority to do so, and that his/her signature is legally sufficient to bind the party on whose behalf he/she is signing.
- h. This Agreement shall remain in full force and effect according to its terms regardless of whether the Interim Surplus Guidelines are in effect or terminated.
- i. This Agreement with the United States is subject to and controlled by the Colorado River Compact of 1922.

UNITED STATES SECRETARY OF THE INTERIOR


Gale A. Norton

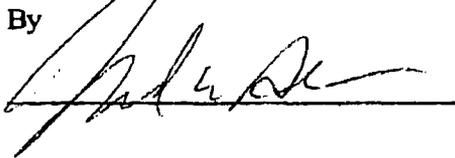
Oct. 10, 2003
Date

COACHELLA VALLEY WATER DISTRICT

By 
General Manager/Chief Engineer

10/10/03
Date

IMPERIAL IRRIGATION DISTRICT

By 

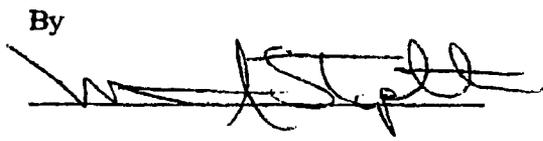
10-10-03
Date

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

By 

10/10/03
Date

SAN DIEGO COUNTY WATER AUTHORITY

By 

10-10-03
Date

Exhibit A: Delivery of Priority 3(a) consumptive use entitlement to the Imperial Irrigation District and the Coachella Valley Water District

Imperial Irrigation District

The Secretary of the Interior shall deliver Imperial Irrigation District's Priority 3(a) consumptive use entitlement under this Colorado River Water Delivery Agreement, pursuant to this Exhibit A and Exhibit B hereto as follows:

Delivered to (entity):	At (point of diversion):	Amount not to exceed (af):	Notes
CVWD	Imperial Dam	103,000	---
MWD	Lake Havasu	110,000	1
SDCWA	Lake Havasu	56,200	2
SDCWA	Lake Havasu	200,000	3
SLR	<i>see note 4</i>	<i>see note 4</i>	4
Misc. & Indian PPRs	Current points of delivery	11,500	5
For benefit of MWD/SDCWA	Lake Havasu	145,000	6
IID	Imperial Dam	Remainder	---
IID's Priority 3(a) Total		3,100,000	---

Notes to Imperial Irrigation District:

1. Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water, dated December 22, 1988; Approval Agreement, dated December 19, 1989. Of amount identified: up to 90,000 af to MWD and 20,000 af to CVWD.
2. Water conserved from the construction of a new lined canal parallel to the All-American Canal from Pilot Knob to Drop 3.
3. Agreement for Transfer of Conserved Water, dated April 29, 1998, as amended. As set forth in Exhibit B, delivery amounts shall be 205,000 AF in calendar year 2021 and 202,500 AF in calendar year 2022.
4. Water conserved from All-American Canal lining project and made available for benefit of San Luis Rey Settlement Parties under applicable provisions of Pub. L. No. 100-675, as amended. Quantity may vary, not to exceed 16,000 afy, as may the point of diversion, subject to the terms of the Allocation Agreement.
5. Water to be delivered to miscellaneous and Indian PPRs identified in the Decree in Arizona v. California, as supplemented. The delivery of water will be to current points of delivery unless modified in accordance with applicable law.
6. As provided in subsection 4(g) of this Agreement.

Coachella Valley Water District

The Secretary of the Interior shall deliver Coachella Valley Water District's Priority 3(a) consumptive use entitlement under this Colorado River Water Delivery Agreement pursuant to this Exhibit A and Exhibit B hereto as follows:

Delivered to (entity):	At (point of diversion):	Amount not to exceed (af):	Notes
SLR	<i>see note 1</i>	<i>see note 1</i>	1
SDCWA	Lake Havasu	21,500	2
Misc. & Indian PPR	Current points of delivery	3,000	3
CVWD	Imperial Dam	Remainder	---
Coachella Valley Water District's Priority 3(a) Total		330,000	---

Notes:

1. Water conserved from Coachella Canal lining project and made available for benefit of San Luis Rey Settlement Parties under applicable provisions of Pub. L. No. 100-675, as amended. Quantity may vary, not to exceed 16,000 afy, as may the point of diversion, subject to the terms of the Allocation Agreement.
2. Water conserved from lining the unlined portion of the Coachella Canal.
3. Water to be delivered to miscellaneous and Indian PPRs identified in the Decree in Arizona v. California, as supplemented. The delivery of water will be to current points of delivery unless modified in accordance with applicable law.

**EXHIBIT B
QUANTIFICATION AND TRANSFERS¹**
in Thousands of Acre-feet²

Column: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

Calendar Year	Priority 1, 2 and 3 ¹		Priority 3 ³		Total Priority 1-3 Conserve/Use Use (columns 14 - 17) 2+13+20 plus 11+16)	11 ISG Benchmarks	12 Annual Targets															
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020				2021
1	3,100	110	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,740.0	3,740	3,740
2	3,100	110	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,730.0	3,730	3,707
3	3,100	110	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,715.0	3,715	3,674
4	3,100	110	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,665.0	3,665	3,640
5	3,100	110	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,650.0	3,650	3,603
6	3,100	110	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,635.0	3,635	3,566
7	3,100	110	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,620.0	3,620	3,530
8	3,100	110	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,605.0	3,605	3,510
9	3,100	110	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,590.0	3,590	3,490
10	3,100	110	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,575.0	3,575	3,470
11	3,100	110	110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,560.0	3,560	3,455
12	3,100	110	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,545.0	3,545	3,440
13	3,100	110	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,530.0	3,530	3,425
14	3,100	110	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,515.0	3,515	3,410
15	3,100	110	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,500.0	3,500	3,395
16	3,100	110	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,485.0	3,485	3,380
17	3,100	110	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,470.0	3,470	3,365
18	3,100	110	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,455.0	3,455	3,350
19	3,100	110	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,440.0	3,440	3,335
20	3,100	110	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,425.0	3,425	3,320
21	3,100	110	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,410.0	3,410	3,305
22	3,100	110	220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,395.0	3,395	3,290
23	3,100	110	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,380.0	3,380	3,275
24	3,100	110	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,365.0	3,365	3,260
25	3,100	110	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,350.0	3,350	3,245
26	3,100	110	260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,335.0	3,335	3,230
2038-2047 ¹⁵	3,100	110	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,466.3	3,466.3	3,466.3
2048-2077 ¹⁶	3,100	110	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,466.3	3,466.3	3,466.3

1 Exhibit B is independent of increases and reductions as allowed under the headwater Overrun and Payback Policy.
2 Any higher use covered by MWD, any lesser use will produce water for MWD and help satisfy ISG Benchmarks and Annual Targets.
3 ID/MWD 1988 Conservation Program conserves up to 110,000 AFY and the amount is based upon periodic verification. Of amount conserved, up to 20,000 AFY to CVWD (column 19), which does not count toward ISG Benchmarks and Annual Targets, and remainder to MWD.
4 Ramp-up amounts may vary based upon construction progress, and final amounts will be determined by the Secretary pursuant to the Allocation Agreement.
5 Any amount identified in Exhibit B for mitigation purposes will only be from non-Cororado River sources and these amounts may be provided by exchange for Colorado River water.
6 These quantities will be transferred to MWD subject to satisfaction of certain conditions and to appropriate federal approvals. For informational purposes only, these transfers may also be subject to state approvals. Schedules are subject to adjustments with mutual consent. After 2006, MWD can acquire if CVWD declines the water. Any water obtained by MWD will be counted as additional agricultural reduction to help satisfy the ISG Benchmarks and Annual Targets. MWD will provide CVWD 50,000 AFY of the 100,000 AFY starting in year 46.
7 MWD will be transferred to MWD subject to satisfaction of certain conditions and to appropriate federal approvals. For informational purposes only, these transfers may also be subject to state approvals. Schedules are subject to adjustments with mutual consent. After 2006, MWD can acquire if CVWD declines the water. Any water obtained by MWD will be counted as additional agricultural reduction to help satisfy the ISG Benchmarks and Annual Targets. MWD will provide CVWD 50,000 AFY of the 100,000 AFY starting in year 46.
8 Up to the amount shown, as agreed upon reduction to ID or CVWD to cover collectively the sum of individual Miscellaneous PPRs. Federal reserved rights and decreed rights. This is a reduction that counts towards ISG Benchmarks and Annual Targets.
9 For purposes of Subparagraph 8(b)(2)(i) and (ii) and 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 7 and 9) not within ID's control; (ii) the amounts of conserved water as determined, and (iii) the amounts of conserved water as determined, where such amounts may vary (column 15).
10 For purposes of Subparagraph 8(b)(2)(i) and (ii) and 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 7 and 9) not within ID's control; (ii) the amounts of conserved water as determined, and (iii) the amounts of conserved water as determined, where such amounts may vary (column 15).
11 For purposes of Subparagraph 8(b)(2)(i) and (ii) and 8(c)(1) and (4) the Secretary will take into account: (i) the satisfaction of necessary conditions to certain transfers (columns 7 and 9) not within ID's control; (ii) the amounts of conserved water as determined, and (iii) the amounts of conserved water as determined, where such amounts may vary (column 15).
12 AIC-consumptive use of priorities 1 through 3 plus 14,500 AF of PPRs must be within 25,000 AF of the amount stated.
13 Assumes SDCWA does not elect termination in year 35.
14 Assumes SDCWA and ID mutually consent to renewal term of 30 years.
Notes:
15 Substituted transfers can be made provided the total volume of water to be transferred remains equal or greater than amounts shown consistent with applicable federal approvals.
16 The shaded columns represent amounts of water that may vary.

Exhibit C: Payback Schedule of Overruns for Calendar Years 2001 and 2002

<i>Year</i>	<i>IID</i>	<i>CVWD</i>	<i>MWD</i>	<i>Total</i>
2004	18,900	9,100	11,000	39,000
2005	18,900	9,100	11,000	39,000
2006	18,900	9,100	11,100	39,100
2007	18,900	9,100	11,100	39,100
2008	18,900	9,200	11,100	39,200
2009	18,900	9,200	11,100	39,200
2010	19,000	9,200	11,100	39,300
2011	19,000	9,200	11,100	39,300
Cumulative	151,400	73,200	88,600	313,200

Note: Each district may, at its own discretion, elect to accelerate paybacks to retire its payback obligation before the end of the eight-year period ending in calendar year 2011. Each district's payback obligation is subject to acceleration in anticipation of a shortage in the Lower Colorado River Basin as provided for in section 8(b).

FILED

OCT 20 PM 3:20

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2 TOM STAHL, Assistant United States Attorney
3 California State Bar No. 078291
4 880 Front Street, Room 6293
San Diego, CA 92101-8893
Tel: (619) 557-7140
Fax: (619) 557-5004

CLERK, U.S. DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA
[Signature]
DEPUTY

5 THOMAS L. SANSONETTI, Assistant Attorney General
6 EDWARD S. GELDERMANN, Senior Trial Attorney
7 Environment and Natural Resources Division
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17 STEPHEN M. MACFARLANE, Trial Attorney
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19 U.S. Department of Justice
20 501 I Street, Suite 9-700
21 Sacramento, California 95814-2322
22 Tel: (916) 930-2204
23 Fax: (916) 930-2210

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF CALIFORNIA

IMPERIAL IRRIGATION DISTRICT,)
20)
Plaintiff,)
21)
v.)
22)
UNITED STATES of AMERICA, et al.,)
23)
Defendants)
24 &)
25 METROPOLITAN WATER DISTRICT)
OF SOUTHERN CALIFORNIA, et al.,)
26)
Defendant-Intervenors.)
27)

Case No. 03-CV-0069W (JFS)
STIPULATION OF DISMISSAL
AND ORDER THEREON

ORIGINAL

[Handwritten signature]

Case No. 03-CV-0069W (JFS)

[Handwritten mark]

ENTERED ON 10-14-03

1 Pursuant to Fed. R. Civ. P. 41(a)(1)(ii), Plaintiff Imperial Irrigation District, Defendant
 2 United States of America, and Defendant-Intervenor Coachella Valley Water District (collectively,
 3 "the parties"), through their undersigned attorneys, stipulate as follows:

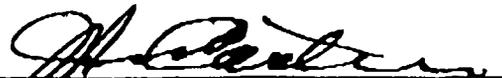
4 1. The parties stipulate that the injunction entered by the Court on March 18, 2003, be
 5 dissolved, and the remand order entered by the Court on April 17, 2003, be vacated.

6 2. The parties stipulate that the above-captioned action be dismissed with prejudice as
 7 to claims 1, 2, 3, 4, 6, 8, and 9, which are related to the Federal Defendants' December 27, 2002
 8 determination challenged therein and the 2003 calendar year; and dismissed without prejudice as
 9 to claims 5, 7, and 10.

10 3. The parties further stipulate that the dismissal with prejudice of claims 1, 2, 3, 4, 6,
 11 8 and 9 is (i) for the limited purpose of precluding further litigation against the Federal Defendants
 12 for the Federal Defendants' December 27, 2002 determination regarding IID's 2003 water order, (ii)
 13 shall not be construed as a decision on the merits, and (iii) is not intended to and shall not preclude
 14 the IID from asserting any right or claim, factual or legal, in any future action, other than to preclude
 15 any claim or remedy for the determination of IID's 2003 water order.

16 Respectfully submitted this 10th day of October, 2003, by:

17 FOR PLAINTIFF IMPERIAL IRRIGATION DISTRICT:

18 By: 
 19 JOHNNY PENN CARTER
 20 General Counsel, Imperial Irrigation District

21 FOR DEFENDANT UNITED STATES OF AMERICA:

22 _____
 23 STEPHEN M. MACFARLANE
 24 Trial Attorney, U.S. Department of Justice
 25
 26
 27
 28

1 Pursuant to Fed. R. Civ. P. 41(a)(1)(ii), Plaintiff Imperial Irrigation District, Defendant
2 United States of America, and Defendant-Intervenor Coachella Valley Water District (collectively,
3 "the parties"), through their undersigned attorneys, stipulate as follows:

4 1. The parties stipulate that the injunction entered by the Court on March 18, 2003, be
5 dissolved, and the remand order entered by the Court on April 17, 2003, be vacated.

6 2. The parties stipulate that the above-captioned action be dismissed with prejudice as
7 to claims 1, 2, 3, 4, 6, 8, and 9, which are related to the Federal Defendants' December 27, 2002
8 determination challenged therein and the 2003 calendar year; and dismissed without prejudice as
9 to claims 5, 7, and 10.

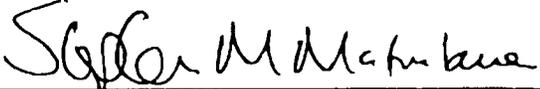
10 3. The parties further stipulate that the dismissal with prejudice of claims 1, 2, 3, 4, 6,
11 8 and 9 is (i) for the limited purpose of precluding further litigation against the Federal Defendants
12 for the Federal Defendants' December 27, 2002 determination regarding IID's 2003 water order, (ii)
13 shall not be construed as a decision on the merits, and (iii) is not intended to and shall not preclude
14 the IID from asserting any right or claim, factual or legal, in any future action, other than to preclude
15 any claim or remedy for the determination of IID's 2003 water order.

16 Respectfully submitted this 18th day of October, 2003, by:

17 FOR PLAINTIFF IMPERIAL IRRIGATION DISTRICT:

18
19 By: _____
20 JOHN PENN CARTER
21 General Counsel, Imperial Irrigation District

22 FOR DEFENDANT UNITED STATES OF AMERICA:

23 
24 _____
25 STEPHEN M. MACFARLANE
26 Trial Attorney, U.S. Department of Justice
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DEFENDANT-INTERVENOR COACHELLA VALLEY
WATER DISTRICT:

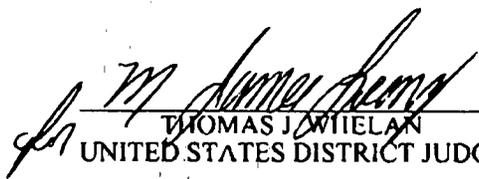
By: _____
STEVEN B. ABBOTT
Redwinc and Sherrill

ORDER

As stipulated by the parties, the injunction previously issued by the Court on March 18, 2003, is DISSOLVED, the Order Vacating and Remanding entered April 17, 2003 is VACATED, and the case is DISMISSED.

IT IS SO ORDERED.

Dated: 10/10/03



THOMAS J. WITELAN
UNITED STATES DISTRICT JUDGE

1 Plaintiff, the Imperial Irrigation District ("IID"); Defendants, the United States of
 2 America, Gale Norton, Bennett Riley, and Robert W. Johnson (collectively, "Federal
 3 Defendants"); and Intervenor-Defendants, the Metropolitan Water District of Southern California
 4 ("Metropolitan") and the Coachella Valley Water District ("CVWD") hereby stipulate, through
 5 their duly-authorized counsel, as follows:

6 1. Intervenor-Defendant Metropolitan wishes to withdraw without prejudice, and be
 7 dropped as a party in this action in anticipation of the later dismissal of the action pursuant to Fed.
 8 R. Civ. P. 41(a)(1)(ii). All other parties to this action do not object to Metropolitan's withdrawal
 9 at this time.

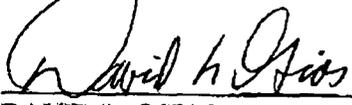
10 2. Metropolitan hereby withdraws from this action without prejudice, and seeks to be
 11 dropped as a party pursuant to Fed. R. Civ. P. 21. All other parties stipulate to Metropolitan's
 12 withdrawal, and to the dropping of Metropolitan as a party.

13 3. All parties stipulate and agree that the Court may lift the stay in this matter solely to
 14 accommodate the withdrawal and dropping of Metropolitan as a party.

15 Dated: October 7, 2003

FOR PLAINTIFF IMPERIAL IRRIGATION DISTRICT

ALLEN MATKINS LECK GAMBLE & MALLORY LLP


 DAVID L. OSIAS

22 Dated: October _____, 2003

FOR FEDERAL DEFENDANTS

STEPHEN M. MACFARLANE
 Trial Attorney, U.S. Department of Justice

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Plaintiff, the Imperial Irrigation District ("IID"); Defendants, the United States of America, Gale Norton, Bennett Raley, and Robert W. Johnson (collectively, "Federal Defendants"); and Intervenor-Defendants, the Metropolitan Water District of Southern California ("Metropolitan") and the Coachella Valley Water District ("CVWD") hereby stipulate, through their duly-authorized counsel, as follows:

1. Intervenor-Defendant Metropolitan wishes to withdraw without prejudice, and be dropped as a party in this action in anticipation of the later dismissal of the action pursuant to Fed. R. Civ. P. 41(a)(1)(ii). All other parties to this action do not object to Metropolitan's withdrawal at this time.

2. Metropolitan hereby withdraws from this action without prejudice, and seeks to be dropped as a party pursuant to Fed. R. Civ. P. 21. All other parties stipulate to Metropolitan's withdrawal, and to the dropping of Metropolitan as a party.

3. All parties stipulate and agree that the Court may lift the stay in this matter solely to accommodate the withdrawal and dropping of Metropolitan as a party.

Dated: October ____, 2003

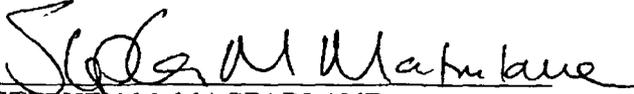
FOR PLAINTIFF IMPERIAL IRRIGATION DISTRICT

ALLEN MATKINS LECK GAMBLE & MALLORY LLP

DAVID L. OSIAS

Dated: October 3, 2003

FOR FEDERAL DEFENDANTS


STEPHEN M. MACFARLANE
Trial Attorney, U.S. Department of Justice

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Dated: October _____, 2003

FOR INTERVENOR-DEFENDANT,
COACHELLA VALLEY WATER DISTRICT

REDWINE AND SHERRILL

STEVEN B. ABBOTT

Dated: October 6, 2003

FOR INTERVENOR-DEFENDANT THE
METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

Linus Masouredis
LINUS MASOUREDIS

ORDER

Pursuant to the above stipulation of the Parties, the stay in this matter is lifted solely for the withdrawal and dropping of Intervenor-Defendant, the Metropolitan Water District of Southern California as a Party. Pursuant to the above stipulation and Federal Rule of Civil Procedure 21, Metropolitan shall be dropped as a party herein, effective immediately.

Dated: October _____, 2003

JUDGE OF THE DISTRICT COURT

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Dated: October 3, 2003

FOR INTERVENOR-DEFENDANT
COACHELLA VALLEY WATER DISTRICT

REDWINE AND SHERRILL

Steven B. Abbott
STEVEN B. ABBOTT

Dated: October _____, 2003

FOR INTERVENOR-DEFENDANT THE
METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

LINUS MASOUREDIS

ORDER

Pursuant to the above stipulation of the Parties, the stay in this matter is lifted solely for the withdrawal and dropping of Intervenor-Defendant, the Metropolitan Water District of Southern California as a Party. Pursuant to the above stipulation and Federal Rule of Civil Procedure 21, Metropolitan shall be dropped as a party herein, effective immediately.

Dated: October _____, 2003

JUDGE OF THE DISTRICT COURT

1 Dated: October _____, 2003

FOR INTERVENOR-DEFENDANT,
COACHELLA VALLEY WATER DISTRICT

2
3 REDWINE AND SHERRILL

4
5
6 _____
STEVEN B. ABBOTT

7
8 Dated: October _____, 2003

FOR INTERVENOR-DEFENDANT THE
METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

9
10
11
12 _____
13 LINUS MASOUREDIS

14
15 **ORDER**

16 Pursuant to the above stipulation of the Parties, the stay in this matter is lifted solely for
17 the withdrawal and dropping of Intervenor-Defendant, the Metropolitan Water District of
18 Southern California as a Party. Pursuant to the above stipulation and Federal Rule of Civil
19 Procedure 21, Metropolitan shall be dropped as a party herein, effective immediately.
20

21 Dated: October 7, 2003

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23 _____
JUDGE OF THE DISTRICT COURT

**AGREEMENT FOR STORAGE OF
GROUNDWATER**

By and Between

**COACHELLA VALLEY WATER DISTRICT,
a California County Water District
("CVWD")**

and

**IMPERIAL IRRIGATION DISTRICT,
a California County Water District
("IID")**

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AGREEMENT FOR STORAGE OF GROUNDWATER

THIS AGREEMENT FOR STORAGE OF GROUNDWATER ("Agreement") is made and entered into this 10TH day of October, 2003 by and between COACHELLA VALLEY WATER DISTRICT, a California County Water District ("CVWD") and Imperial Irrigation District, a California Irrigation District ("IID"). IID and CVWD are sometimes referred to individually as a "Party" and collectively as "Parties."

RECITALS

- A. CVWD is a county water district, organized under the *California County Water District Law*, codified at *Section 30000 et seq.* of the *California Water Code* and delivers water in Riverside County, California for potable and irrigation purposes.
- B. IID is an irrigation district, organized under the *California Irrigation District Law*, codified at *Section 20500, et seq.* of the *California Water Code* and delivers water in Imperial County, California for potable and irrigation purposes.
- C. IID is a contractor with the United States of America for the delivery of Colorado River water as authorized by the *Boulder Canyon Project Act* (Act of December 21, 1928; *45 Stat.1057, as amended*). Pursuant to such contract, IID is entitled along with certain other entities, including CVWD, to beneficial consumptive use of certain quantities of Colorado River water.
- D. The service area of CVWD is divided into an upper valley and lower valley which have groundwater basins (collectively, "Basins")
- E. IID desires to acquire storage space from CVWD and CVWD desires to provide storage space to IID in the Basins to store Colorado River water ("IID Water") on the terms and conditions set forth herein.

NOW THEREFORE, IN CONSIDERATION OF THE COVENANTS AND AGREEMENTS CONTAINED IN THIS AGREEMENT AND FOR OTHER GOOD AND VALUABLE CONSIDERATION, THE RECEIPT AND SUFFICIENCY OF WHICH THE PARTIES HEREBY ACKNOWLEDGE, IID AND CVWD AGREE THAT THE TERMS OF THIS AGREEMENT ARE AS FOLLOWS:

ARTICLE I

DEFINITIONS

1.1 Except as set forth in the body of this Agreement, all capitalized terms shall have the meanings set forth in

Exhibit "A" attached hereto and by this reference incorporated herein.

ARTICLE II

STORAGE OF WATER

2.1 (a) Subject to the availability of storage in the Basins and the terms and conditions set forth herein, CVWD agrees to provide to IID storage for IID Water in the Basins. The determination of whether there is storage availability in the Basins shall be made by CVWD in its reasonable discretion. In determining the availability of storage capacity in the Basins, if any, CVWD shall assess (i) whether there is physical availability of space in the Basins to store water, (ii) whether the delivery of water by IID will potentially interfere with the delivery, recharge and storage of water by CVWD or other parties with pre-existing rights, (iii) whether the facilities exist ('Recharge Facilities,' 'Additional Recharge Facilities' and 'IID Recharge Facilities' as defined in Article III) to recharge and store the water into the Basins, and (iv) whether CVWD can reduce its consumptive use of Colorado River water in an equal amount for delivery by exchange to IID ('Return Water'). (It is the intent of the Parties that CVWD provide Return Water to IID by reduction of the consumptive use of Colorado River water by CVWD.)

(b) The rights of IID to store water in the Basins shall be subject to: (i) CVWD's storage needs in the Basins as determined by CVWD in its sole and absolute discretion, but subject to its good-faith obligation to IID under this Agreement; (ii) the pre-existing rights for the storage needs of the Metropolitan Water District of Southern California, a California public agency ("MWD"); (iii) the storage needs of certain public agencies with preexisting rights, which agencies are more particularly listed on Exhibit "B" attached hereto and by this reference incorporated herein; and (iv) Article IV below. CVWD, MWD and those entities listed on Exhibit "B" shall sometimes be referred to herein, collectively as the "Pre-existing Right Holders."

2.2 (a) IID shall provide written notice ("Storage Notice") to CVWD by October 1 of the preceding year in which IID desires to deliver Colorado River water to CVWD for the purpose of storage of such water in the Basins. The Storage Notice shall include the proposed acre feet to be stored in the Basins during the Calendar Year and the proposed delivery schedule of such water.

By December 1, prior to the year of proposed storage, CVWD shall provide written notice to IID of the amount of IID Water which may be stored in the Basins, if any, during the next calendar year and the schedule for acceptance of such water.

Notwithstanding the foregoing, IID acknowledges that, at the time of the actual delivery by IID of the IID Water, CVWD may not be able to store the IID Water due to natural disasters, acts of God or other reasons beyond CVWD's control. For these reasons if CVWD cannot store the agreed to IID Water in the Basins, IID agrees to waive and release all claims against CVWD and its officers, directors, employees, agents, successors and assigns (collectively, "Released Parties") arising from or in connection with the failure to store IID Water in the Basins or any loss in connection therewith.

ARTICLE III

RECHARGE FACILITIES

- 3.1 It is the intent of CVWD to locate sites and construct facilities to recharge and store water into the Basins to accommodate a recharge capacity estimated to be 80,000 acre feet per year ('Recharge Facilities'). At the time of the execution of this Agreement, CVWD has (i) identified one or more locations acceptable to CVWD for the recharge of water into the Basins and (ii) proceeding to design and construct facilities to meet the intent of the Recharge Facilities noted above. IID's right to store IID Water at these facilities shall be subordinate to CVWD and the Pre-Existing Right Holders. Additional sites and facilities could be developed pursuant to the following Articles 3.2 through 3.5, and CVWD may also use "in lieu" recharge to recharge and store water in the Basins.
- 3.2 At any time during the term of this Agreement IID may, by written notice to CVWD, request that CVWD attempt to identify additional locations for recharge facilities or "in lieu" recharge opportunities which are satisfactory to recharge additional water into the Basins, in the sole and absolute opinion of CVWD, but subject to CVWD's good-faith obligation to IID under this Agreement. CVWD may, but shall not be obligated to, undertake such commission if IID agrees to be responsible for all costs and expenses incurred by CVWD. Upon written notice from CVWD, IID shall deposit such sum with CVWD as shall be reasonably required by CVWD ("Search Deposit"). The Search Deposit shall be held by CVWD for all costs and expenses incurred by CVWD to attempt to

locate or cause to be located, adequate locations to recharge water into the Basins. IID hereby authorizes CVWD to use the Search Deposit to offset costs and expenses, including staff and other labor costs, related to the foregoing. If further funds are necessary and based on a proper accounting of the Search Deposit, IID shall, within thirty (30) days after written demand, deposit funds with CVWD in an amount CVWD and IID considers sufficient to pay or reimburse CVWD's expenses and costs. CVWD shall not be required to undertake or continue to identify the location of additional sites unless and until IID delivers to CVWD the Search Deposit and the additional monies requested by CVWD and agreed to by IID. Once CVWD has provided written notice to IID that sites exist or do not exist, any excess or unused Search Deposit funds will be reimbursed to IID.

3.3 In the event CVWD identifies acceptable additional sites or in-lieu recharge opportunities, CVWD shall notify IID, in writing, of the location thereof and whether CVWD shall design and construct, or cause to be designed and constructed 'Additional Recharge Facilities' consisting of the following: water transmission facilities if required, recharge facilities, and pumping facilities ('Recovery Wells'), if required, to extract water from the Basins at such locations. In such event, IID's right to store IID Water at such sites shall only be subordinate to CVWD and not the Pre-Existing Right Holders.

3.4 If CVWD does not elect to construct the Additional Recharge Facilities or develop the additional in-lieu recharge opportunities, IID may elect to require CVWD to design and construct recharge facilities or in-lieu recharge opportunities at the identified site(s), 'IID Recharge Facilities'. In such event, IID shall pay all costs and expenses incurred or accrued in connection with the design and construction of the IID Recharge Facilities in accordance with the following:

(a) CVWD shall employ (with IID's approval and oversight), at IID's cost and expense, a qualified professional engineering firm to plan, design and prepare detailed construction plans and specifications for the IID Recharge Facilities in full and complete accordance with CVWD's design criteria and standards. Prior to hiring the engineering firm, CVWD shall notify IID, in writing, of the initial estimated cost of the engineering firm to complete the foregoing. IID shall deposit such sum with CVWD the amount set forth in the initial estimate plus an additional fifteen percent as a contingency amount ("Engineering Deposit"). The Engineering Deposit shall be held by CVWD for all costs and expenses incurred by CVWD pursuant to the agreement with the engineering firm. IID hereby authorizes

CVWD to use the Engineering Deposit to offset costs and expenses related to the foregoing. If further funds are necessary and IID agrees based on a proper accounting from CVWD, IID shall, within thirty (30) days after written demand, deposit funds with CVWD in an amount CVWD considers sufficient to pay or reimburse CVWD's costs and expenses. CVWD shall not be required to retain or continue the services of an engineering firm unless and until IID delivers to CVWD the Engineering Deposit and the additional funds requested by CVWD. Any excess or unused Engineering Deposit funds will be reimbursed to IID.

(b) IID shall pay or reimburse CVWD for (i) compliance with all laws, including environmental laws and all requirements of the Federal Endangered Species Act and the California Endangered Species Act, arising out of or in connection with, construction of the IID Recharge Facilities and for compliance with all (ii) conditions and mitigation measures of each such consent or permit which must be satisfied in connection therewith. The term "environmental laws" shall include, without limitation, the California Environmental Quality Act, the National Environmental Policy Act and other applicable state and federal environmental laws.

(c) Following receipt of CVWD's and IID's approval of the design and construction plans and specifications and compliance with the environmental laws, CVWD shall employ a contractor to install the IID Recharge Facilities. IID shall pay all costs and expenses associated with the construction of the IID Recharge Facilities.

Prior to hiring the contractor, CVWD shall notify IID, in writing, of the initial estimated cost to construct the IID Recharge Facilities. IID shall deposit such sum with CVWD plus an additional fifteen percent as a contingency amount ("Construction Deposit"). The Construction Deposit shall be held by CVWD for all costs and expenses incurred by CVWD pursuant to the agreement with the contractor and inspections and other services relating to the construction. IID hereby authorizes CVWD to use the Construction Deposit to offset costs and expenses related to the foregoing. If further funds are necessary and IID agrees based on a proper accounting by CVWD, IID shall, within thirty (30) days after written demand, deposit funds with CVWD in an agreed to amount CVWD considers sufficient. CVWD shall not be required to retain or continue the services of a contractor unless and until IID delivers to CVWD the Construction Deposit and additional funds requested by CVWD. Any excess or unused Construction Deposit funds will be reimbursed to IID.

3.5 In the event IID has paid all of the costs set forth in sections 3.1 through 3.4, IID may request storage of IID Water pursuant to the provisions of Article II at the IID Recharge Facilities; and IID's right to recharge and store IID Water at

such IID Recharge Facilities shall be subject to availability of storage capacity in the Basins as determined by CVWD in its reasonable discretion. If such capacity exists, such IID Water storage shall be superior or senior to the Pre-Existing Right Holders, and IID's right to call for Return Water shall be subject to available capacity in the delivery facilities to deliver or allow the stored water to be used in CVWD's service area. Such reasonable discretion on the part of CVWD shall include a determination that said existing capacity is or will be needed by CVWD pursuant to its groundwater management plan during the relevant IID storage period.

3.6 At the termination of this Agreement, ownership of said IID Recharge Facilities shall revert to CVWD.

ARTICLE IV

DELIVERY OF IID WATER TO CVWD FOR RECHARGE

4.1 IID shall deliver the IID Water to CVWD at the Coachella Canal Heading on the All-American Canal for delivery of the IID Water through the Coachella Canal or such other location as shall be agreed to by the Parties ("Point of Delivery").

4.2 Notwithstanding the Point of Delivery, the risk of not delivering the IID Water to the Recharge Facilities, Additional Recharge Facilities and/or the IID Recharge Facilities shall remain with IID until such water has been delivered to the recharge facilities unless such non-delivery is a result of the gross negligence or willful misconduct of CVWD arising out of or in connection with the foregoing. IID agrees to waive and release all claims against CVWD arising from or in connection with the foregoing. Thus, for example, if there is a break in the Coachella Canal, and IID Water is lost due to the break, CVWD shall have no responsibility or liability to IID due to the loss of IID Water.

4.3 All IID Water delivered by IID to CVWD shall be measured by measuring devices and equipment installed or existing at the delivery structures at the Point of Delivery. In the event water is delivered to CVWD concurrently with the IID Water, the amount of IID Water shall be the total amount of water purportedly delivered less the total amount of water purportedly delivered to CVWD.

ARTICLE V

PAYMENT TO CVWD FOR STORAGE AND RECHARGE OF IID WATER

5.1 Before IID Water is delivered to CVWD for recharge and

storage, IID shall be notified of all costs including operations, maintenance, pro rated capital costs of the Recharge Facilities other than IID Recharge Facilities, administration and necessary consents, approvals, permits, licenses or entitlements, if any, from all groundwater authorities for the purposes necessary to implement the provisions of this Agreement. In addition, CVWD shall notify IID of all costs for compliance with all environmental laws and requirements of the Federal Endangered Species Act, arising out of or in connection with, transmission and delivery, recharge and storage of IID Water.

5.2 If IID agrees with these costs for the recharge and storage of IID Water in the Basins and IID pays to CVWD all costs and expenses incurred by or in connection with the transmission of IID Water from the Point of Delivery to the Recharge Facilities, Additional Recharge Facilities, and/or IID Recharge Facilities and the recharge and storage of IID Water through the Recharge Facilities, Additional Recharge Facilities and/or IID Recharge Facilities into the Basins in accordance with the formula attached as Exhibit "C" hereto and by this reference incorporated herein, and CVWD shall recharge and store the IID Water pursuant to this Agreement.

5.3 Any dispute arising hereunder concerning actual or estimated costs and/or expenses, including appropriate allocation thereof among various entities including any Party hereto and whether before or after CVWD issues an invoice therefor to IID, shall be resolved following the procedures for the resolution of disputes set forth in Article 17, Sections 17.1 and 17.2 of the "Agreement For Acquisition of Conserved Water" between the Parties hereto dated October 10, 2003.

ARTICLE VI

IID'S STORAGE ACCOUNT

6.1 On the execution of this Agreement, CVWD shall establish an account for water stored in the Basins for the benefit of IID ("IID's Storage Account").

6.2 The Parties acknowledge that there shall be a loss of a certain amount of IID Water from the Point of Delivery to the recharge of such water into the Basins due to evaporation, canal leakage and other like or similar causes. The Parties agree that for every acre foot delivered to CVWD at the Point of Delivery, five percent (5%) shall be deducted for such loss ("Delivery Loss").

6.3 The Parties acknowledge that there shall be a loss of a certain amount of IID Water after it is stored in the Basins. The Parties hereby agree that for every acre foot of IID Water delivered to CVWD at the Point of Delivery less Delivery Loss

pursuant to Article 6.2, IID shall be deemed to lose five percent (5%) of water per year due to such loss ("Storage Loss"). The annual loss shall be prorated over a three hundred sixty five day (365) period beginning on the day the IID Water is delivered to CVWD.

6.4 (a) Each month, IID's Storage Account shall be increased by the amount of IID Water delivered to the Point of Delivery described in section 4.1.

(b) IID's Storage Account shall be decreased by (i) the amount of Colorado River water returned to IID pursuant to the terms of Article VII below; (ii) any loss of IID Water not due to the gross negligence or willful misconduct of CVWD pursuant to Article 4.2 above, (iii) any amount of water calculated as a Delivery Loss per Article 6.2 above; and (iv) any amount of water calculated as a Storage Loss per Article 6.3 above.

ARTICLE VII

RETURN OF STORED WATER

7.1 IID shall provide written notice ("Return Water Notice") to CVWD by October 1 of the preceding year in which IID desires CVWD to return water ("Return Water") to IID. The Return Water Notice shall include the amount of Return Water requested by IID.

7.2 By December 1, prior to the year IID desires CVWD to provide Return Water, CVWD shall notify IID whether IID's Storage Account contains adequate water to satisfy IID's request and whether this water can be delivered to IID by exchange at the Imperial Dam Diversion Facilities. It is the intent of the Parties that CVWD provide Return Water to IID by reduction of the consumptive use of Colorado River water by CVWD.

7.3 CVWD performs its obligations to make the Return Water available for IID by reducing its consumptive use of the Colorado River water at the Imperial Dam by an amount equal to the lesser of (a) the amount of Return Water requested in the Return Water Notice, or (b) the amount of water listed in the IID Storage Account on January 1 of the Agreement Year the Return Water is to be delivered to IID; provided that CVWD shall not be required to make the Return Water available to IID greater than the maximum possible reduction of the consumptive use of Colorado River water by CVWD. When CVWD acts in that manner, CVWD has satisfied its obligation to make Return Water available for acquisition. IID accepts responsibility for the Return Water at the Imperial Dam. IID bears the sole risk and responsibility of transporting the Return Water to its service area and any and all Conveyance

Losses shall be borne by IID.

7.4 IID acquires the Return Water beginning on January 1 of the Agreement Year in which CVWD shall provide the Return Water to IID. IID has the complete discretion within an Agreement Year on the scheduling of its diversions of the Return Water from Imperial Dam to IID's service area, subject to CVWD not being injured by reduced flow through the Coachella Canal.

ARTICLE VIII

TERM

8.1 This Agreement shall terminate at the earlier of seventy-five (75) years after the Benchmark Date; or concurrently with the termination of the Quantification Settlement Agreement.

8.2 At the end of the term or upon the early termination of this Agreement, neither the terms of this Agreement or the conduct of the Parties in performance of this Agreement, shall be construed to enhance or diminish the rights of either Party as such rights existed at the execution date, including without limitation, rights arising from the application of principles of reliance, estoppel, intervening public use, domestic or municipal priority, domestic or municipal shortage or emergency or equitable apportionment.

8.3 At the end of the term or upon early termination of this Agreement IID's Storage Account shall be reduced to zero. IID shall not be entitled to any compensation or replacement water for later storage in the Basins.

ARTICLE IX

PAYMENT

9.1 Invoices will be sent annually on June 1 itemizing the amount due to CVWD pursuant to the terms of this Agreement. The invoice shall also specify the date of mailing IID will send by the following July 1, a statement of acceptance of the invoice, or a statement detailing any disagreement in the amount due and owing. Payment of the undisputed amount and fifty percent (50%) of any disputed amount of any such invoice shall be due on the following August 1 ("Due Date"). Payment of the balance of any unpaid disputed amount or refund of any of the paid disputed amount shall be due on the tenth (10th) business day following final resolution of the payment dispute.

9.2 Every payment to CVWD required under this Agreement must be made in lawful money of the United States of America, to the order of CVWD and paid by wire transfer. The initial wire

transfer instructions are as follows:

Payment will be considered made upon confirmation of the funds being transferred and received by CVWD's bank on or before the Due Date, notwithstanding any clearing time or delay in CVWD's bank releasing funds to CVWD. CVWD may change these wire transfer instructions by giving a notice in accordance with section 13.1 below.

9.3 Payment of the amount required shall be delinquent if not received by CVWD before the close of crediting activity on the Due Date. In the event that IID is delinquent in the payment of any amount required, IID shall pay an additional charge ("Late Payment Charge") equal to one percent (1%) of the delinquent payment for each month or portion thereof that such payment remains delinquent.

ARTICLE X

CONDITIONS TO THE PARTIES' OBLIGATIONS

10.1 The obligations of the Parties under this Agreement are subject to the IID/CVWD Acquisition Agreement becoming effective.

ARTICLE XI

DEFAULT

11.1 Each of the following constitutes an "Event of Default" by CVWD under this Agreement:

(a) CVWD fails to perform or observe any term, covenant or undertaking in this Agreement that it is to perform or observe and such default continues for forty-five (45) days from a Notice of Default being sent in the manner provided in section 13.1.

(b) Any warranty, representation or other statement made by or on behalf of CVWD and contained (i) in this Agreement or (ii) in any other document furnished in compliance with or in reference to this Agreement is on the date made, or later proves to be false, misleading or untrue in any material respect.

11.2 Each of the following constitutes an Event of Default by IID under this Agreement:

(a) IID fails to pay the required amount by the Due Date. If IID fails to pay the amounts required hereunder by the Due Date, that delinquent payment will bear a late payment

charge as set forth in section 9.1, until paid in full.

(b) IID fails to perform or observe any term, covenant or undertaking in this Agreement that it is to perform or observe and such default continues for forty-five (45) days from a Notice of Default being sent in the manner provided in section 13.1.

(c) Any warranty, representation or other statement made by or on behalf of IID and contained (i) in this Agreement or (ii) in any other document furnished in compliance with or in reference to this Agreement is on the date made, or later proves to be false, misleading or untrue in any material respect.

ARTICLE XII

REMEDIES

12.1 Each Party recognizes that, apart from disputes regarding costs and expenses which are subject to resolution under the provisions of Section 5.3 above, the rights and obligations of the Parties under this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party does not perform in accordance with this Agreement, the other Party will likely suffer harm curable only by the imposition of an injunction requiring specific performance. Thus, each of the Parties agrees that any breach of this Agreement by any Party shall entitle the non-breaching Party to injunctive relief, including but not limited to, a decree of specific performance, in addition to any other remedies at law or in equity that may be available in the circumstances.

12.2 The Parties do not intend that any right or remedy given to a Party on the breach of any provisions under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delay in exercising any right or remedy, the non-breaching Party does not thereby waive the right or remedy. In addition, no single or partial exercise of any right, power or privilege precludes any other or further exercise of a right, power or privilege granted by this Agreement, or otherwise.

12.3 Each Party acknowledges that it is a "local agency" within the meaning of *section 394(c) of the California Code of Civil Procedure (Code Civ.Proc.)*. Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under *section 394(a) of the Code of Civil Procedure*, as a matter of law be subject to:

(a) Being transferred to a "Neutral County," or instead having a disinterested judge for a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.

(b) Each Party hereby:

(i) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action;

(ii) Waives the usual notice required under the law-and-motion provisions of *Rule 317 of the California Rules of Court*;

(iii) Consents to having any motion under *section 394(c)* heard with notice as an *ex parte* matter under *Rule 379 of the California Rules of Court*; and

(iv) Acknowledges that this Agreement, and in particular this section 13.2, may be submitted to the court as part of the moving papers.

(c) Nothing in this section, however, shall impair or limit the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

12.4 This Article shall not apply to disputes regarding costs and expenses which disputes shall be resolved under Section 5.3 of Article V above.

ARTICLE XIII

GENERAL PROVISIONS

13.1 All notices, requests, demands or other communications under this Agreement must be in writing, and sent to the addresses of each Party set forth below. Notice will be sufficiently given for all purposes as follows:

Personal Delivery. When personally delivered to the recipient. Notice is effective on delivery.

Certified Mail. When mailed certified mail, return receipt requested, postage prepaid. Notice is effective on receipt, if a return receipt confirms delivery.

Overnight Delivery. When delivered by an overnight

delivery service such as Federal Express, charges prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.

Facsimile Transmission. Notice is effective on receipt, provided that the facsimile machine provides the sender a notice that indicates the transmission was successful, and that a copy is mailed by first-class mail on the facsimile transmission date.

Addresses for purpose of giving notice are as follows:

IID: Imperial Irrigation District
Attention: General Manager

Mail: P.O. Box 937
Imperial CA 92251

Personal/
Overnight Personal 333 E Barioni
Blvd
Overnight: Imperial CA 92251
Telephone: 760-339-9477
Facsimile: 760

CVWD: Coachella Valley Water
District
Attention: General Manager/Chief
Engineer
Mail: P.O. Box 1058
Coachella CA 92236

Personal/ Highway 111 and Avenue 52
Overnight: Coachella CA 92236
Telephone: 760-398-2651
Facsimile: 760-398-3711

(a) A correctly addressed notice that is refused, unclaimed or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that notice was refused, unclaimed or deemed undeliverable by the postal authorities, messenger or overnight delivery service.

(b) A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

13.2 No waiver of a breach, failure of condition or any right or remedy contained in or granted by the provisions of this

Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right or remedy. No waiver of a breach, failure of condition or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

13.3 This Agreement may be executed in two or more counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

13.4 This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

13.5 Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

13.6 This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to conflict of law provisions.

13.7 This Agreement is and will be binding upon and will inure to the benefit of the Parties and upon dissolution, the legal successors and assigns of their assets and liabilities. No Party may assign any of its rights or delegate any of its duties under this Agreement and any assignment of delegation made in violation of this Agreement shall be void and of no force or effect.

13.8 This Agreement (including the appendices and exhibits hereto constitutes the final, complete and exclusive statement of the terms of the Agreement among the Parties pertaining to its subject matter and supersedes all prior and contemporaneous understandings or agreements of the Parties. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

13.9 This Agreement may be supplemented, amended or modified only by the written agreement of the Parties. No supplement, amendment or modification will be binding unless it is in writing and signed by all Parties.

13.10 The Parties hereby agree that during the term of this

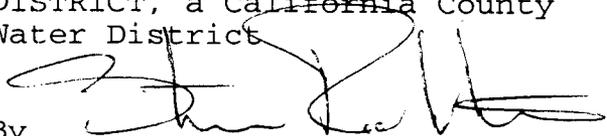
Agreement that IID and its representatives shall have the right, during business hours and upon three (3) business day written notice, to have access to the books and records with respect to IID's Storage Account. CVWD shall be required to retain books and records for a three (3) year period after any Calendar Year.

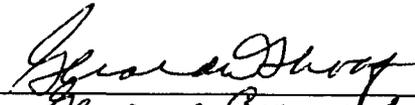
13.11 If the performance of this Agreement, or any obligation hereunder, is interfered with by fire, explosion, an act of God, war, revolution, labor strife, civil commotion, or any act of public enemies, notwithstanding anything contained herein, the failure or delay in performance by either party shall be excused on a day by day basis to the extent of such interference provided that the Party so affected uses it reasonable efforts to remove such causes of non-performance.

WHEREFORE, the Parties hereto have executed this Agreement on the date set out above.

CVWD:

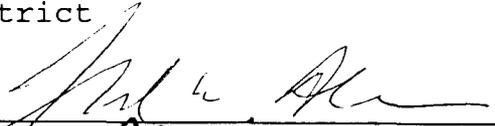
COACHELLA VALLEY WATER
DISTRICT, a California County
Water District

By 
Its: General Manager-Chief
Engineer

By 
Its: General Counsel

IID:

IMPERIAL IRRIGATION DISTRICT,
a California Irrigation
District

By 
Its: PRESIDENT

By 
Its: CHIEF COUNSEL

LIST OF EXHIBITS

EXHIBIT "A"	DEFINITIONS
EXHIBIT "B"	PRE-EXISTING RIGHT HOLDERS
EXHIBIT "C"	COST FORMULA

EXHIBIT A

DEFINITIONS

1998 IID/SDCWA Transfer Agreement - The Agreement for Transfer of Conserved Water by and between IID and the San Diego County Water authority dated April 29, 1998.

Agreement Year - As defined in Section 1.1(i) of the 1998 IID/SDCWA Transfer Agreement.

Benchmark Date - As defined in Section 1.1(r) of the 1998 IID/SDCWA Transfer Agreement.

Calendar Year - The twelve (12)-month period running from January 1 through December 31.

California Environmental Quality Act (CEQA) - California Public Resources Code §§ 2100 et seq.

Conveyance Losses - The actual loss of water to evaporation, seepage, or other similar cause resulting from any transportation of Conserved Water from Imperial Dam to the CVWD service area or to the MWD service area, as the case may be.

IID/CVWD Acquisition Agreement - The Agreement for Acquisition of Conserved Water by and between IID and CVWD dated October 10, 2003.

National Environmental Policy Act ("**NEPA**") - Title 4, United States Code § 4321 et seq., 40 Code of Federal Regulations § 1500.1 et seq.

Quantification Settlement Agreement - The agreement of same title among CVWD, The Metropolitan Water District of Southern California and the IID dated October 10, 2003.

EXHIBIT B
DESERT WATER AGENCY

EXHIBIT C

COST FORMULA

Within thirty (30) days of the identification of Recharge Facilities or Additional Recharge Facilities by CVWD, or the identification of IID Recharge Facilities by IID, CVWD and IID shall meet and confer and negotiate in good faith to set a formula by which IID shall pay CVWD for all costs and expenses incurred by CVWD in connection with the transmission of water from the Point of Delivery, to the Recharge Facilities, into the basins, and the delivery of Return Water. Should CVWD and IID be unable to reach agreement within sixty (60) days of their initial meeting, any remaining disagreements shall be determined in accordance with Section 17.2 of the IID/CVWD Acquisition Agreement.

**AGREEMENT FOR ACQUISITION OF WATER BETWEEN
COACHELLA VALLEY WATER DISTRICT AND THE
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

THIS AGREEMENT FOR ACQUISITION OF WATER (“**Agreement**”) is made and entered into this 10th day of October, 2003, by and between THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA (“**MWD**”), a California metropolitan water district, and COACHELLA VALLEY WATER DISTRICT (“**CVWD**”), a California county water district, each of which is at times referred to individually as “**Party**” and which are at times collectively referred to as “**Parties**.”

RECITALS:

A. Imperial Irrigation District (“**IID**”) is an irrigation district organized under the California Irrigation District Law, codified at §§ 20500 et seq. of the California Water Code, and delivers Colorado River water in Imperial County, California for irrigation and potable purposes.

B. MWD is a metropolitan water district organized under the California Metropolitan Water District Act, § 109-1 of the Appendix to the California Water Code, and delivers Colorado River water in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura, Counties, California for domestic and irrigation purposes.

C. CVWD is a county water district organized under the California County Water District Law, codified at §§ 30000 et seq. of the California Water Code, and delivers Colorado River water in Riverside County, California for irrigation and potable purposes.

D. This Agreement is one of several agreements executed and delivered as of the date hereof by the Parties and by other agencies, including IID, pursuant to the Quantification Settlement Agreement among the Parties and IID dated as of the date of this Agreement (the “**QSA**”), which settles a variety of long-standing disputes regarding the priority, use and transfer of Colorado River water and establishes the terms for the further distribution of Colorado River water among these entities for up to seventy-five years based upon the water budgets set forth therein.

E. The QSA provides, in part, that certain parties thereto shall enter into a binding agreement wherein IID shall have the obligation to provide and CVWD shall have the right to acquire up to fifty thousand (50,000) acre-feet of Conserved Water per year and an additional fifty-three thousand (53,000) acre-feet per year of Conserved Water on the terms and conditions set forth therein. Pursuant thereto, IID and CVWD are executing contemporaneously herewith that certain Agreement for Acquisition of Conserved Water between Imperial Irrigation District and Coachella Valley Water District. Pursuant to the IID/CVWD Acquisition Agreement, CVWD may at its election occasionally reduce or permanently reduce, upon notice given to IID, its obligation to acquire the Conserved Water.

F. MWD has certain rights to take and pay for the Conserved Water in the event that CVWD chooses not to acquire the Conserved Water pursuant to the IID/CVWD Acquisition Agreement.

G. Pursuant to the IID/CVWD Acquisition Agreement, IID's obligation to make available and CVWD's right to acquire the Second Fifty-Three Thousand Acquisition shall terminate on the earlier of the termination of the IID/CVWD Acquisition Agreement or the end of Year 45 (as that term is defined in the QSA) ("**Expiration Date**").

H. MWD has agreed to pay or reimburse CVWD for a portion of CVWD's cost to acquire the Second Fifty-Three Thousand Acquisition in accordance with the terms and conditions set forth in the QSA.

I. Beginning in Year 46, as such term is defined in the QSA, IID is to be relieved of its obligation to provide the Second Fifty-Three Thousand Acquisition to CVWD, and MWD is to provide or cause to be provided to CVWD up to Fifty Thousand (50,000) acre-feet of water per year as Replacement Water for the Second Fifty-Three Thousand Acquisition, on the terms and conditions set forth herein.

J. The QSA further provides, in part, that the Parties hereto are to enter into, subject to the satisfaction or waiver of any conditions precedent set forth in the QSA, an agreement wherein MWD is to deliver to CVWD thirty-five thousand (35,000) acre-feet per year of water ("**Entitlement Water**") to which MWD is entitled pursuant to the State Water Resources Development System, authorized and constructed pursuant to California Water Code §§ 12930, et seq. ("**State Water Project**"). All deliveries of Entitlement Water shall be exchanged with MWD for 35,000 acre-feet per year of MWD's Colorado River water ("**Exchange Water**") ("**MWD/CVWD Delivery and Exchange Agreement**").

K. The Parties desire to set forth terms and conditions of the above described arrangements.

L. The Parties do not intend to, and under the Agreement do not in any way, transfer, assign, encumber, or grant to each other any ownership interest in or control over each other's water rights.

M. The Parties intend that this Agreement shall become effective and commence only after compliance with the California Environmental Quality Act, California Public Resources Code §§ 2100 et seq. ("**CEQA**"), and the National Environmental Policy Act, Title 4, United States Code §§ 4321 et seq. ("**NEPA**"), as applicable.

AGREEMENT

NOW THEREFORE, in consideration of the covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, CVWD and MWD agree as follows:

ARTICLE 1 DEFINITIONS

1.1 Incorporated Definitions. The terms with initial capital letters and acronyms that are used in this Agreement shall have the same meanings as set forth in Section 1.1 of the QSA, unless the context otherwise requires.

1.2 Additional Definitions. As used in this Agreement, in addition to the QSA defined terms, the following terms shall have the meanings set forth below:

- (1) **Due Date.** As defined in Section 3.3 of this Agreement.
- (2) **Entitlement Water.** As defined in Recital J.
- (3) [Intentionally not used.]
- (4) [Intentionally not used.]
- (5) [Intentionally not used.]
- (6) **First Fifty Thousand Acquisition.** As defined in the IID/CVWD Acquisition Agreement.
- (7) **Expiration Date.** As defined in Recital G.
- (8) **NEPA.** As defined in Recital M.
- (9) **Occasional Reduction Notice.** As defined in the IID/CVWD Acquisition Agreement.
- (10) **Permanent Reduction Notice.** As defined in the IID/CVWD Acquisition Agreement.
- (11) **Postponement Notice.** As defined in the IID/CVWD Acquisition Agreement.
- (12) **Option.** As defined in the IID/MWD Acquisition Agreement.
- (13) **QSA.** As defined in Recital D.
- (14) **Replacement Water.** As defined in Section 4.1 of this Agreement.

(15) **RFR Exercise Notice.** As defined in the IID/MWD Acquisition Agreement.

(16) **Right of First Refusal.** As defined in the IID/MWD Acquisition Agreement.

(17) **Second Fifty-Three Thousand Acquisition.** As defined in the IID/CVWD Acquisition Agreement.

(18) [Intentionally not used.]

(19) **State Water Project.** As defined in Recital J.

1.3 **Rules of Construction and Word Usage.** The provisions of Section 1.2 of the QSA are incorporated herein by reference, unless the context requires otherwise.

ARTICLE 2 BASIC PROVISION

Subject in all events to the specific terms and conditions of this Agreement:

(a) CVWD will compromise certain positions, amend the 1989 Approval Agreement, and cause portions of the Coachella Canal to be lined in order to create Conserved Water for acquisition in accordance with the Allocation Agreement, as defined in the QSA.

(b) MWD will compromise certain positions, amend the 1989 Approval Agreement, work cooperatively with CVWD to cause the State of California to pay for lining a portion of the Coachella Canal, reimburse CVWD for certain costs associated with CVWD's acquisition of Conserved Water from IID and provide CVWD with Replacement Water.

(c) CVWD and MWD agree that at the termination of this Agreement, neither the terms of the Agreement nor the conduct of the Parties in performance of this Agreement confers upon the other any legal or equitable rights that would not have existed in the absence of this Agreement and the Parties' performance hereunder.

ARTICLE 3 REIMBURSEMENT FOR A PORTION OF COST FOR CONSERVED WATER

3.1 **Second Fifty-Three Thousand Acquisition Price.** The QSA and the IID/CVWD Acquisition Agreement provide that CVWD shall have the right to acquire the Second Fifty-Three Thousand Acquisition from IID for One Hundred Twenty-Five Dollars (\$125.00) in 1999 Dollars per AF.

3.2 **Reimbursement Obligations.** MWD hereby agrees to reimburse CVWD for a portion of the amount actually paid by CVWD to IID for acquisition of Fifty Thousand (50,000) AF out of the Second Fifty-Three Thousand Acquisition as follows:

(1) An amount equal to Seventy-five Dollars (\$75.00) in 1999 Dollars per AF for the first (1st) Twenty Thousand (20,000) AF per year of the Second Fifty Thousand Acquisition; and

(2) An amount equal to Forty-two Dollars and Fifty Cents (\$42.50) in 1999 Dollars per AF for the amount of water exceeding Twenty Thousand (20,000) AF per year of the Second Fifty Thousand Acquisition up to a maximum of Thirty Thousand (30,000) AF per year.

3.3 MWD Payments of Reimbursement Obligations. Promptly after receipt by CVWD and MWD of an annual invoice from IID with respect to water acquired pursuant to the Second Fifty-Three Thousand Acquisition, as contemplated by Section 6.1 of the IID/CVWD Acquisition Agreement, the appropriate officers of CVWD and MWD shall meet and confer with a view to reaching agreement on behalf of CVWD and MWD as to the accuracy (or inaccuracy) of such invoice and the substance of any joint communication to be timely made to IID with respect to the amounts due and owing by each of CVWD and MWD to IID.

(1) MWD shall pay directly to IID, by the Due Date and in the manner set forth in Sections 6.1 and 6.2 of the IID/CVWD Acquisition Agreement, MWD's share of any undisputed amount of each such invoice, plus fifty percent (50%) of its share of any jointly disputed amount. MWD also shall pay directly to IID the balance of any unpaid disputed amount, and shall be entitled to receive directly from IID MWD's share of any refund of a paid disputed amount, following final resolution of the payment dispute with IID.

(2) In the event that CVWD and MWD disagree, or are for any reason unable timely to reach agreement, as to the proper amount of MWD's reimbursement obligation under Section 3.2 with respect to any annual invoice from IID, MWD shall, at least two Business Days prior to the June 15 following the date of such invoice, provide to CVWD a written statement detailing MWD's position as to the proper amount of its reimbursement obligation thereunder and, on or before the Due Date, shall pay directly to IID with respect to such invoice the amount that MWD has determined to be proper and shall pay to CVWD fifty percent (50%) of the difference between such amount and the amount CVWD has determined to be MWD's proper reimbursement (but not in excess of the amount specifically allocated to MWD on the IID invoice). In any such event, CVWD shall assume unilateral responsibility for providing the appropriate statement to IID, and for making all required payments to IID (net of any payment made to IID by MWD) with respect to the IID invoice in question, pursuant to Section 6.1 of the IID/CVWD Acquisition Agreement.

(3) Any dispute between CVWD and MWD over the proper amount of MWD's reimbursement obligation shall be resolved pursuant to Section 12.1(1). Payment of the balance of any unpaid disputed amount or any refund of any of the disputed amount paid by MWD (including, in either case, late payment charges with respect to such amount accruing from the Due Date, as calculated in the manner set forth in Section 3.6 shall be due and payable on the tenth (10th) Business Day following final resolution of the payment dispute.

(4) The Parties acknowledge that CVWD is directly liable to IID for the full payment for the Second Fifty-Three Thousand Acquisition, and that, as an accommodation to the Parties, IID will accept direct payment from both MWD and CVWD. However, if MWD fails

timely to pay IID any amount to be paid by MWD directly to IID in accordance with this Section 3.3, and if CVWD instead pays such amount to IID, MWD shall promptly reimburse such amount to CVWD together with late payment charges accruing from the date such payment was originally due to be paid by MWD to IID, as determined in accordance with Section 3.6.

3.4 Payments. Any payment to CVWD required under this Agreement must be made in lawful money of the United States of America, to the order of CVWD, and paid by wire transfer. The initial wire transfer instructions are as follows:

COACHELLA VALLEY WATER DISTRICT

Wire to:
Union Bank of California
445 S. Figueroa Street
Los Angeles, CA 90071
ABA No. 122000496
Contact Person: Donna Tredway

Credit to: Coachella Valley Water District
Account No. 2740013028

3.5 Timing of Payment. Payment will be considered made by MWD upon confirmation of the funds being transferred and received by CVWD's bank, notwithstanding any clearing time or delay in CVWD's bank releasing funds to CVWD. CVWD may change these wire transfer instructions by giving notice in accordance with Section 15.12 below.

3.6 Late Payments. Payment of any amount required to be paid to CVWD shall be delinquent if not received by CVWD before the close of crediting activity on the date any such payment is due. In the event that MWD is delinquent in the payment to CVWD of any amount required, MWD shall pay a late payment charge equal to two percent (2%) of the delinquent payment for each month or portion thereof that such payment remains delinquent, provided, however, that if the total period of delinquency does not exceed five (5) Business Days, the additional charge shall be equal to one percent (1%) of the delinquent payment.

3.7 Settling-Up Invoice. Promptly after receipt by CVWD and MWD of an IID settling-up invoice, as contemplated by Section 6.4 of the IID/CVWD Acquisition Agreement, the appropriate officers of CVWD and MWD shall meet and confer with a view to reaching agreement on behalf of CVWD and MWD as to the accuracy (or inaccuracy) of such invoice and the substance of any joint communication to be timely made to IID with respect to the amounts due and owing by each of CVWD and MWD to IID or the amounts of credit to which each of CVWD and MWD shall be entitled. Should there be a disagreement between CVWD and MWD, or failure timely to reach agreement, concerning the payment or credit amounts of the IID settling-up invoice, the payment provisions pending resolution of the dispute will be the same as those applicable to disputes between CVWD and MWD over IID invoices as provided in Section 3.3 above.

ARTICLE 4 REPLACEMENT WATER

4.1 MWD Replacement Water Obligation. The QSA and the IID/CVWD Acquisition Agreement relieve IID of the obligation to provide the Second Fifty-Three Thousand Acquisition to CVWD on the Expiration Date. MWD shall provide or cause to be provided to CVWD up to Fifty Thousand (50,000) AF of water per year to replace the Conserved Water theretofore provided by IID to CVWD ("**Replacement Water**") beginning on the day after the Expiration Date and continuing until the Termination Date. The extent of MWD's obligation to make the water available to CVWD if it is Colorado River water is to reduce MWD's diversions from the Colorado River below that which it would otherwise have been absent this obligation to permit the water so made available to be delivered by the Secretary to Imperial Dam. In the event that the Replacement Water obligation is fulfilled by non-Colorado River water, the Parties will work cooperatively to make all necessary arrangements to have the water delivered to CVWD at a mutually agreed upon delivery point. CVWD has no duty to divert any or all of the Replacement Water. The payments by CVWD to MWD for Replacement Water are due and payable whether or not CVWD diverts the water.

4.2 Permanent Reduction of Replacement Water. MWD's obligation to provide or cause to be provided Replacement Water will be reduced incrementally in reverse order to the extent of any water which is the subject of a Permanent Reduction Notice.

4.3 Occasional Reductions to Replacement Water. CVWD shall have a limited right to occasionally reduce the amount of Replacement Water. This limited right is subject to the following terms and conditions:

(1) **Annual Reduction Amount.** The occasional reductions shall be in a volume comprised of one or more increments of five thousand (5,000) AF.

(2) **Aggregate Reduction Maximum.** CVWD may not reduce its acquisition of Replacement Water by more than one hundred thousand (100,000) AF in the aggregate during any rolling ten-year period.

(3) **Frequency.** CVWD may not exercise its limited right to an occasional reduction in more than three years in any rolling ten-year period nor more than three years in succession.

(4) **Notice.** CVWD shall provide written notice to MWD at least one year prior to the January 1 of any Calendar Year in which the occasional reduction is to take place. The notice shall specify the annual reduction amount and number of years and contain sufficient information for MWD to determine CVWD compliance with aggregate maximum, and frequency limitations.

4.4 MWD Use or Transfer of Non-Acquired Replacement Water. MWD shall have the right to use or transfer the Replacement Water occasionally not acquired by CVWD subject to applicable restraints under then existing law. MWD shall make reasonable efforts to lawfully use or transfer Replacement Water occasionally not acquired by CVWD. If MWD reasonably chooses to use some or all of the non-acquired Replacement Water, CVWD shall be

relieved of its payment obligations for the volume used by MWD. If MWD lawfully transfers some or all of the Replacement Water occasionally not acquired by CVWD, CVWD shall be relieved of its payment obligation in an amount equal to the value of the consideration received by MWD in exchange for the transferred Replacement Water, provided however, that in no event will CVWD have any right to share in or receive any payment as a result of MWD's transfer of the Replacement Water. CVWD will also be relieved of its payment obligation to the extent of payments MWD would receive should MWD decide not to engage in a lawful transfer to a ready, willing and able transferee. CVWD can bring potential transferees to MWD's attention for MWD's consideration. Should MWD be unable to reasonably use or transfer the non-acquired Replacement Water, CVWD shall not be relieved of its payment obligation to MWD, but will be permitted to use the Replacement Water for any lawful purpose within its jurisdictional boundary.

4.5 Replacement Water Price. CVWD shall pay to MWD for the Replacement Water an amount equal to Fifty Dollars (\$50.00) in 1999 Dollars per AF for the first Twenty Thousand (20,000) AF of Replacement Water per year, Eighty-Two Dollars and Fifty Cents (\$82.50) in 1999 Dollars per AF for Replacement Water exceeding Twenty Thousand (20,000) AF of water per year up to a maximum of Thirty Thousand AF per year, plus in each case an amount equal to the lesser of (i) Three Dollars and Fifty Cents (\$3.50) in 1999 Dollars per AF, or (ii) the actual annualized cost incurred by MWD to comply with federal, state and local environmental laws and regulations, denoted as mitigation costs directly associated with making the water available to CVWD at Imperial Dam

4.6 Invoices. Invoices will be sent by MWD annually on June 1, and specify the date of mailing, date on which the payment becomes due, per acre-foot charges, and total amount due and owing. CVWD will send by the following June 15 a statement of acceptance of the invoice, or a statement detailing any disagreement in the per acre-foot charges or the total amount due and owing. Payment of the undisputed amount and fifty per cent (50%) of any disputed amount of any such invoice shall be due on the following July 1. Payment of the balance of any unpaid disputed amount, or refund of any of the paid disputed amount shall be due on the tenth (10th) Business Day following final resolution of the payment dispute.

4.7 Amount of Annual Payments. The amount for each annual payment is the quantity in AF of Replacement Water available to be acquired as of January 1 of that Year times the applicable price in 1999 Dollars.

4.8 Method of Payment. Every payment to MWD required under this Agreement must be made in lawful money of the United States of America, to the order of MWD and paid by wire transfer. The initial wire transfer instructions are as follows:

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Wire to:

Bank of America

Metropolitan Water District of Southern California

Credit to:

Account No. 1459350937

ABA No. 121000358

Payment will be considered made by CVWD upon confirmation of the funds being transferred and received by MWD's bank on or before the Due Date, notwithstanding any clearing time or delay in MWD's bank releasing funds to MWD. MWD may change these wire transfer instructions by giving notice in accordance with Section 15.12 below.

4.9 Late Payments. Payment of the amount required shall be delinquent if not received by MWD before the close of crediting activity on the date such payment is due. In the event that CVWD is delinquent in the payment of any amount required, CVWD shall pay a late payment charge equal to two percent (2%) of the delinquent payment for each month or portion thereof that such payment remains delinquent, provided, however, that if the total period of the delinquency does not exceed five (5) Business Days, the additional charge shall be equal to one percent (1%) of the delinquent payment.

4.10 Annual Settling-Up Payment. Although the payment provision set forth above is based on a price as of each July 1 expressed in 1999 Dollars, as adjusted by the Inflation Index, it is expected that as of the date that the invoice is to be prepared and sent to CVWD, only a United States published estimate of the relevant Inflation Index determinations may be available, with the final determination by the United States not being available until a later date. In contemplation of that circumstance, MWD shall send a settling-up invoice to CVWD within sixty (60) days of the United States publication of the relevant Inflation Index final determinations which identifies any change, as a payment or credit due, in the previously sent invoice. Within thirty (30) days of transmission of the MWD settling-up invoice, CVWD will send a statement of acceptance of the settling-up invoice, or a statement detailing any disagreement. The payment by or credit to CVWD will be due by adding the payment or subtracting the credit, in either case without interest, to the next June 1 invoice sent by MWD, with payment due on the following July 1. Should there be a disagreement in the payment or credit amount of the MWD settling-up invoice, the payment provisions pending resolution of the dispute will be the same as disputes over the June 1 invoices.

4.11 Schedule. CVWD shall, on an annual basis, prepare a schedule for the delivery of the Replacement Water for the next succeeding calendar year. MWD shall initiate or cause to be initiated making such water available to CVWD at Imperial Dam and shall make such water available pursuant to such schedule unless otherwise mutually agreed.

4.12 No Cumulative Rights. CVWD's right to acquire Replacement Water under this Agreement is not cumulative and CVWD has no right to any such Replacement Water that it does not divert within the Agreement Year. Thus, if CVWD fails to divert all of the Replacement Water to which it is entitled under this Agreement in any one Agreement Year, the

amount which CVWD is entitled to acquire and the amount that MWD is obligated to make available under this Agreement in any other Agreement Year is unaffected.

4.13 Environmental Compliance. Subject to the payment requirement set forth in Section 4.5 above, MWD shall, prior to the Termination Date, at its sole cost and expense, be responsible for compliance with all environmental laws and all requirements of the Federal Endangered Species Act and the California Endangered Species Act, arising out of or in connection with making the Replacement Water available to CVWD at Imperial Dam and for compliance with all conditions and mitigation measures of each such consent or permit which must be satisfied for the purposes of making available the Replacement Water at Imperial Dam. The term “environmental laws” shall include, without limitation, CEQA, NEPA, the Endangered Species Act and other applicable state and federal environmental laws. In addition to the foregoing, MWD shall, at its sole cost and expense, apply for and obtain all necessary consents, approvals, permits, licenses or entitlements, if any, from all governmental authorities, including, but not limited to, the United States Fish and Wildlife Service and the California Department of Fish and Game for the purposes of making available Replacement Water at Imperial Dam.

ARTICLE 5 APPROVAL AGREEMENT WATER

5.1 IID/MWD 1988 Agreement and 1989 Approval Agreement. The IID/MWD 1988 Agreement and the 1989 Approval Agreement shall be amended as set forth in the Amendment to the Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water between the Imperial Irrigation District and The Metropolitan Water District of Southern California and the Amendment to Approval Agreement among the Imperial Irrigation District, The Metropolitan Water District of Southern California, Palo Verde Irrigation District, and Coachella Valley Water District, which Amendments are executed as of the date of this Agreement. The Agreement to Supplement Approval Agreement between MWD and CVWD dated December 19, 1989 shall be amended as set forth in the Amendment to Agreement to Supplement Approval Agreement between The Metropolitan Water District of Southern California and Coachella Valley Water District, which amendment is executed as of the date of this Agreement.

ARTICLE 6 DELIVERY AND EXCHANGE OF STATE WATER PROJECT WATER

6.1 MWD/CVWD Delivery and Exchange Agreement. The delivery of 35,000 AF of MWD’s State Water Project entitlement to CVWD and the exchange of such Entitlement Water for a portion of MWD’s Colorado River water supplies shall be as set forth in MWD/CVWD Delivery and Exchange Agreement.

ARTICLE 7 CONDITIONS TO CVWD’s and MWD’s OBLIGATIONS

7.1 Satisfaction of Conditions. CVWD’s rights to reimbursement and to acquire and pay for Replacement Water, and MWD’s obligations to provide Replacement Water and to

reimburse CVWD, are all subject to the Execution of the QSA and the Related Agreements dated as of the date of this Agreement.

7.2 Written Waiver of Conditions. The Parties may agree to waive in writing any one or more of the foregoing conditions, in whole or in part; provided, however, that neither Party shall waive review in accordance with CEQA or NEPA or other requirements under applicable laws.

7.3 Extension by Agreement. The Parties may agree to extend the date by which any condition must be satisfied or waived.

7.4 Consequence of Failure of Conditions. If the conditions in this Article are not timely satisfied or waived, then this Agreement will be void ab initio, and all rights granted by this Agreement will be terminated and forfeited.

ARTICLE 8 PRIORITIES 3a, 4, 5, 6a AND 7

8.1 Limitation on Diversions. CVWD and MWD have agreed to limit diversions under Priorities 3a, 4, 5, 6a and 7 as explicitly set forth in the QSA.

ARTICLE 9 NOTICE OF OCCASIONAL AND PERMANENT REDUCTIONS

9.1 MWD Rights of First Refusal. CVWD acknowledges the importance of, and acquiesces in, MWD's rights to acquire from IID any portions of the First Fifty Thousand or Second Fifty-Three Thousand Acquisitions that CVWD determined not to acquire in accordance with its rights to Occasional and/or Permanent Reductions, all as provided for Sections 3.5 and 3.7 of the IID/CVWD Acquisition Agreement, as well as the importance of the Option discussed below.

9.2 CVWD Notices. CVWD shall provide a copy of its Occasional Reduction Notice or Permanent Reduction Notice to MWD at the same time that the notice is provided to IID in accordance with Section 3.5 and 3.7 of the IID/CVWD Acquisition Agreement.

9.3 MWD Notices. MWD shall provide a copy to CVWD of its RFR Exercise Notice to either exercise its Right of First Refusal or its decision to decline the exercise of its Right of First Refusal at the same time that the RFR Exercise Notice is provided to IID in accordance with the terms of Section 5.1 of the IID/MWD Acquisition Agreement. By declining to exercise its Right of First Refusal MWD does not waive its rights, if any, under the QSA and Related Agreements, to challenge any transaction by CVWD and/or IID to make the Conserved Water available to others.

9.4 MWD Rejection of RFR. MWD's failure to provide the RFR Exercise Notice in accordance with Section 5.1 of the IID/MWD Acquisition Agreement shall be a conclusive rejection by MWD of its election to exercise its Right of First Refusal to any of the Conserved Water identified in the Occasional or Permanent Reduction Notice.

**ARTICLE 10
OPTION WATER**

10.1 MWD Option on Conserved Water. CVWD acknowledges the importance of, and acquiesces in, MWD's rights pursuant to the Option to acquire from IID four thousand (4,000) AF of Conserved Water in 2008, eight thousand (8,000) AF of Conserved Water in 2009, and up to ten thousand (10,000) AFY in each of 2010 through 2016 to the extent that CVWD could have acquired such volumes of Conserved Water from IID in such Years, but elects pursuant to Section 3.3 or Section 3.4 of the IID/CVWD Acquisition Agreement to acquire less Conserved Water in such years than the maximum volumes otherwise contemplated under Section 3.1 of such Agreement.

(1) **Notices.** CVWD shall provide a copy of any Postponement Notice and/or Adjustment Notice to MWD at the same time that such notice is provided to IID in accordance with Sections 3.3 and 3.4 of the IID/CVWD Acquisition Agreement.

(2) **Exercise of Option.** MWD shall send to CVWD a copy of any MWD notice to IID of the exercise of MWD's rights under the Option as provided in Article 6 of the IID/MWD Acquisition Agreement.

(3) **Reimbursement of CVWD Environmental Costs.**

(i) In any Year in which MWD exercises its rights to acquire from IID Conserved Water under the Option or MWD's Right of First Refusal, MWD shall pay to CVWD for each acre-foot acquired as reimbursement to CVWD for environmental mitigation and Salton Sea Restoration Fund payments made by CVWD for such water an amount to be determined at such time ("**exercise date**") as follows:

(a) The base reimbursement amount per acre-foot shall be one (1) divided by the aggregate amount of Conserved Water that CVWD is entitled to receive from IID pursuant to the IID/CVWD Acquisition Agreement in effect as of the date of this Agreement, multiplied by the sum of the then present value of monies that CVWD has paid to the QSA-Joint Powers Authority ("**QSA-JPA**") as of the exercise date and the present value of the remaining monies that CVWD is obligated to pay to the QSA-JPA after the exercise date, and

(b) The present value calculations for purposes of clause (i) shall be done using the lesser of a six percent (6%) per annum interest/discount rate or such rate as may then be in effect for purposes of QSA-JPA calculations of payment obligations.

(ii) Upon the termination of the QSA-JPA, in the event that the then present value of CVWD's aggregate payments to the QSA-JPA, calculated by using the same interest/discount factor used for purposes of subsection (i) is less than the multiplier of the fraction used for purposes of subsection (i), then in such event the amount determined under subsection (i) shall be re-determined using such lower amount as the multiplier, and any difference refunded by CVWD to MWD, with interest at the same rate.

(iii) Payment under this section 10.1(3)(i) shall be made to CVWD at the same time as payment is made to IID for the Conserved Water acquired by MWD.

ARTICLE 11 TERM

11.1 Term. This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date.

11.2 Effective Date. The obligations of the Parties under Articles 2, 3, 4, 5, 6, 8, 9, 10 and 15 hereof shall be contingent upon the occurrence of, and shall not become effective until, the Effective Date.

11.3 Effect of Termination. The provisions of Section 3.4 of the QSA are incorporated herein by reference.

ARTICLE 12 DEFAULTS AND DISPUTES

12.1 Nature of Dispute or Claim. Disputes between CVWD and MWD arising under this Agreement shall be resolved in accordance with the procedures described in this Article 12.

(1) Disputes between the Parties on the following subjects shall be resolved under the binding arbitration process set forth in Section 12.2: (i) the amount of any payment claimed by CVWD to be due and owing from MWD; (ii) the amount of any payment claimed by MWD to be due and owing from CVWD; (iii) the calculation or application of the Inflation Index; and (iv) the reasonableness of steps taken by CVWD or MWD to cure or resolve the effects of a Force Majeure event under Section 15.1;

(2) All other disputes and claims arising under this Agreement shall be resolved in an action or proceeding between the Parties, subject to the terms and conditions set forth in Section 12.3, unless otherwise mutually agreed.

12.2 Arbitration. Disputes on the subjects specified in Section 12.1 that cannot be resolved by agreement shall be resolved through binding arbitration conducted in a Neutral County or such other location as the Parties may agree.

(1) An arbitration proceeding may be initiated by either Party sending a demand for arbitration to the other Party in conformance with the Notice provisions set forth in Section 15.12 of this Agreement. The Parties shall impanel a group of three arbitrators by each designating an arbitrator of their choice who shall then select the third panel member. If the two arbitrators appointed by the Parties cannot agree on the selection of a third arbitrator within ten (10) Business Days after their designation, the third arbitrator shall be selected by the presiding judge of the Superior Court in the county in which the proceeding will be held. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. The arbitrators shall take an oath of impartiality

prior to the commencement of the arbitration proceeding. The Parties shall use their reasonable best efforts to conclude the arbitration proceeding within ninety (90) Business Days of the selection of the third panel member.

(2) The arbitrators shall conduct the proceeding in accordance with the procedural laws of California, and shall determine the rights and obligations of the Parties in accordance with substantive state and, if applicable, federal law. Discovery shall be governed by the California Code of Civil Procedure (“CCP”), with all applicable time periods for notice and scheduling provided therein reduced by one-half (½). Notwithstanding the preceding sentence, the arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding compliance with discovery requests shall be decided by the arbitrators. A decision by at least two of three arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

(3) The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party whom the decision is against. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the other Party's costs.

12.3 Actions or Proceedings Between the Parties. Disputes on subjects other than those specified in Section 12.1(1) that cannot be resolved by agreement shall be resolved in an action or proceeding between the Parties subject to the following provisions;

(1) Each Party acknowledges that it is a “local agency” within the meaning of § 394(c) of the CCP. Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to (i) being transferred to a Neutral County, or (ii) instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.

(2) Each party hereby:

(i) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;

(ii) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;

(iii) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and

(iv) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

(3) Nothing in this Section 12.3 shall impair or limit the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

ARTICLE 13 REMEDIES

13.1 Specific Performance. Each Party recognizes and agrees that the rights and obligations set forth in this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party defaults by not performing in accordance with the specific wording of any of the provisions in this Agreement applicable to that Party, or otherwise breaches, the other Party would likely suffer irreparable harm. Therefore, if either Party breaches this Agreement, an action at law for damages or other remedies at law would be wholly inadequate to protect the unique rights and interests of the other Party to the Agreement. Accordingly, in any court controversy concerning this Agreement, the Agreement's provision will be enforceable in a court of equity by a decree of specific performance. This specific performance remedy is not exclusive and is in addition to any other remedy available to the Parties.

13.2 Cumulative Rights and Remedies. The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the nonbreaching Party fails to exercise or delays in exercising any such right or remedy, the nonbreaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power or privilege precludes any other or further exercise of a right, power or privilege granted by this Agreement or otherwise.

ARTICLE 14 EMINENT DOMAIN/TAKINGS

14.1 Effect on Agreement. If at any time during the term of this Agreement, any of the Replacement Water to be made available to CVWD by MWD pursuant to this Agreement is taken for any part of the remaining term of this Agreement by lawful exercise of the power of eminent domain by any sovereign, municipality, public or private authority or other person ("**taking**"), the terms of this Agreement shall not be affected in any way, except that for the period of the taking as to the Replacement Water taken only, MWD shall be relieved of its obligation to make such Replacement Water available to CVWD and CVWD shall be relieved of its obligation to pay MWD for such Replacement Water. Each Party hereby waives any right it may have under the provisions of Code of Civil Procedure Section 1265.130 to petition the Superior Court to terminate this Agreement.

14.2 Compensation for Taking. The compensation paid for any taking of Replacement Water otherwise to be made available to CVWD pursuant to this Agreement (the

“**subject Replacement Water**”) shall be separately assessed under Code of Civil Procedure Section 1260.220(a) according to each party's interest as follows:

(1) CVWD shall be entitled to:

(i) Any compensation paid for the amount attributable to the market value of the subject Replacement Water for the period from the date of the taking to the earlier of the date of the end of the taking or the term of this Agreement in excess of the present value at the date of the taking of the amounts that CVWD would otherwise be obligated to pay to MWD for the subject Replacement Water under this Agreement;

(ii) Any compensation paid for severance damage to CVWD attributable to the taking of the subject Replacement Water; and

(iii) Any compensation paid for loss of goodwill to CVWD attributable to the taking of the subject Replacement Water.

(2) MWD shall be entitled to all other compensation paid, including but not limited to:

(i) Any compensation paid for the present value at the date of the taking of the amounts that CVWD would otherwise be obligated to pay to MWD for the subject Replacement Water under this Agreement;

(ii) Any compensation paid for severance damage to MWD attributable to the taking of the subject Replacement Water; and

(iii) Any compensation paid for the loss of goodwill to MWD attributable to the taking of the subject Replacement Water.

(3) Nothing in this Article 14 shall affect any right of either Party to relocation assistance benefits.

(4) Nothing in this Article 14 shall affect the rights or claims of either Party with respect to a taking of some or all of its water rights, including Colorado River water rights.

ARTICLE 15 GENERAL PROVISIONS

15.1 Force Majeure. If the performance, in whole or in part, of the obligations of the respective Parties under this Agreement is hindered, interrupted or prevented by wars, strikes, lockouts, fire, acts of God or by other acts of military authority, or by any cause beyond the control of the respective Parties hereto, whether similar to the causes herein specified or not, such obligations of the respective Parties under this Agreement shall be suspended to the extent and for the time the performance thereof is affected by any such act. Upon the cessation of any such hindrance, interruption or prevention, both Parties shall become obligated to resume and

continue performance of their respective obligations under this Agreement. Notwithstanding any act described in this Section, the Parties shall diligently undertake all reasonable effort to perform this Agreement.

15.2 Records. Each of the Parties shall maintain and make available for inspection by the other Party, during regular office hours, accurate records pertaining to the times and amounts of exchange deliveries and to the costs, disbursements and receipts with respect to the construction, operation and maintenance of structures for the delivery of water to CVWD.

15.3 Exchange Information. CVWD shall consult with MWD in advance of providing information and shall provide MWD copies of the information CVWD provides to IID regarding any exchanges with MWD pursuant to Section 14.7 of the IID/CVWD Acquisition Agreement.

15.4 No Conveyance. This Agreement shall not be construed as a conveyance, abandonment or waiver of any right to the use of water which is held or owned by CVWD, or a conveyance, abandonment or a waiver of any right to the use of water which is held or owned by MWD. Nor shall it be construed as conferring any right whatsoever upon any person, firm, corporation or other public or private entity not a Party to this Agreement.

15.5 Governing Law. California law shall govern this Agreement and any dispute arising from the contractual relationship between the Parties under the Agreement; provided, however, that federal law shall be applied as appropriate to the extent it bears on the resolution of any claim or issue relating to the permissibility of any exercise of rights referenced in Article 9 or Article 10.

15.6 Binding Effect; No Assignment. This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. Neither Party may assign any of its rights or delegate any of its duties under this Agreement. Any Assignment or Delegation made in violation of this Agreement is void and of no force or effect.

15.7 Due Authority. Any person signing this Agreement represents that he/she has full power and authority to do so, and, that his/her signature is legally sufficient to bind the Party on whose behalf he/she is signing.

15.8 Entire Agreement. This Agreement (including other agreements referenced in this Agreement) constitutes the final, complete, and exclusive statement of the terms of the agreement between the Parties pertaining to the acquisition of 1989 Approval Agreement Water, Replacement Water and Exchange Water by CVWD from MWD and the payment and reimbursement obligations of the Parties for Conserved Water, and supercedes all prior and contemporaneous understandings or agreements of the Parties. Neither Party has been induced to enter into this Agreement by, nor is either Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

15.9 Modification. This Agreement may be supplemented, amended, or modified only by the agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by both Parties.

15.10 Time of the Essence. Time is of the essence of and under this Agreement and of every provision thereof.

15.11 Joint Defense. The Parties agree to proceed with reasonable diligence and use reasonable best efforts to jointly defend any lawsuit or administrative proceeding challenging the legality, validity, or enforceability of any term of this Agreement, or any Party's right to act in accordance with any of the terms of this Agreement.

15.12 Notice. All notices, requests, demands, or other communications under this Agreement must be in writing, and sent to both addresses of each Party. Notice will be sufficiently given for all purposes as follows:

- *Personal Delivery.* When personally delivered to the recipient. Notice is effective on delivery.
- *First-Class Mail.* When mailed first-class to the last address of the recipient known to the Party giving notice. Notice is effective five mail delivery days after it is deposited in a United States Postal Service office or mailbox.
- *Certified Mail.* When mailed certified mail, return receipt requested. Notice is effective on receipt, if a return receipt confirms delivery.
- *Overnight Delivery.* When delivered by an overnight delivery service such as Federal Express, charges prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.

Addresses for purposes of giving notice are as follows:

To MWD:

For U.S. Mail:

Metropolitan Water District of Southern California
Attention: Chief Executive Officer
P.O. Box 54153
Los Angeles, CA 90054-0153

For personal or overnight delivery:

Metropolitan Water District of Southern California
Attention: Chief Executive Officer
700 North Alameda Street
Los Angeles, CA 90012
Telephone: 213-217-6211
Facsimile: 213-217-6655

With a copy to:

Attention: General Counsel
Addresses as provided above

To CVWD: *For U.S. Mail:*

Coachella Valley Water District
Attention: General Manager-Chief Engineer
P.O. Box 1058
Coachella, CA 92236

For personal or overnight delivery:

Coachella Valley Water District
Attention: General Manager-Chief Engineer
Avenue 52 and Highway 111
Coachella, CA 92236
Telephone: 760-398-2651
Facsimile: 760-398-3711

With a copy to: Gerald D. Shoaf, Esq.
Steven B. Abbott, Esq.
Redwine and Sherrill
1950 Market Street
Riverside, CA 92501-1720
Telephone: 909-684-2520
Facsimile: 909-684-9583

A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service. A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

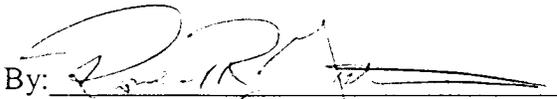
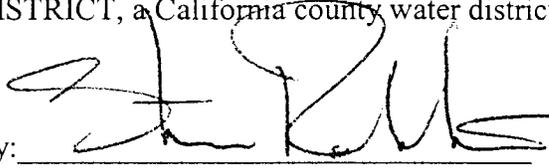
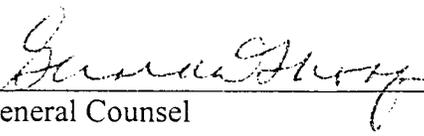
15.13 Counting Days. Days shall be counted by excluding the first day and including the last day, unless the last day is not a Business Day, and then it shall be excluded. Any act required by this Agreement to be performed by a certain day shall be timely performed if it is completed before 5:00 p.m. Pacific Time on that date, unless otherwise specified. If the day for performing any obligation under this Agreement is not a Business Day, then the time for performing that obligation shall be extended to 5:00 p.m. Pacific Time on the next Business Day.

15.14 Ambiguities. Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

15.15 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon, provided such signature page is

attached to another counterpart identical thereto, except for having the additional signature page executed by the other Party to this Agreement attached thereto.

IN WITNESS WHEREOF, MWD and CVWD have executed this Agreement as of the day and year first written above.

"MWD"	THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, a California metropolitan water district By:  Its: Chief Executive Officer
Approved as to form: By:  Its: General Counsel	
"CVWD"	COACHELLA VALLEY WATER DISTRICT, a California county water district By:  Its: General Manager-Chief Engineer
Approved as to form: By:  Its: General Counsel	

**ENVIRONMENTAL COST SHARING, FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

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**ENVIRONMENTAL COST SHARING , FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

This Environmental Cost Sharing, Funding, and Habitat Conservation Plan Development Agreement ("Agreement") is entered into as of October 10, 2003 ("Agreement Date"), by and among the COACHELLA VALLEY WATER DISTRICT, a California county water district ("CVWD"); the IMPERIAL IRRIGATION DISTRICT, a California irrigation district ("IID"); and the SAN DIEGO COUNTY WATER AUTHORITY, a California county water authority ("SDCWA") (CVWD, IID, and SDCWA are sometimes referred to individually in this Agreement as "Party" and collectively as the "Parties").

RECITALS:

A. IID, MWD and CVWD have entered into the Quantification Settlement Agreement dated as of October 10, 2003 (the "QSA").

B. IID and SDCWA have executed an Agreement for Transfer of Conserved Water dated April 29, 1998, and various amendments thereto (collectively, the "1998 IID/SDCWA Transfer Agreement") subject to environmental review and other conditions, which describes certain proposed activities involving the conservation of water by IID and the transfer of the conserved water to SDCWA.

C. IID and SDCWA have entered into an agreement dated January 27, 2000 to share certain costs related to the environmental review and compliance process and other state and federal approvals required to satisfy conditions necessary to implement the transactions described in the 1998 IID/SDCWA Transfer Agreement on the terms set forth therein (as the same may be amended from time to time, the "IID/SDCWA Cost Sharing Protocol).

D. The State of California has enacted the QSA Legislation as defined in the QSA.

E. The Parties and the State of California have executed the QSA-JPA as defined in the QSA, which provides, among other things, that Environmental Mitigation Costs for the IID water budget and certain IID transfers pursuant to the QSA and Related Agreements in excess of one hundred thirty-three million dollars (\$133,000,000) in Effective-Date Dollars shall be the exclusive responsibility of the State of California so as to ensure compliance with all federal and state environmental laws, including but not limited to the federal Endangered Species Act, federal Clean Air Act, and federal Clean Water Act.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises set forth herein, the Parties hereby agree as follows:

**ARTICLE 1
DEFINITIONS**

1.1. Incorporated Definitions. The terms with initial capital letters that are used in this Agreement shall have the same meaning as set forth in Section 1.1 of the QSA, as of the Closing Date of the QSA, unless the context otherwise requires.

1.2. Additional Definitions. The following terms with initial capital letters shall have the meaning as set forth below.

(1) **Changed Circumstances.** Changes in circumstances affecting a species or the geographic area covered by the HCP that can reasonably be anticipated by the parties and that can reasonably be planned for in the HCP (e.g. a fire or other natural catastrophic event in areas prone to such event.) Changed Circumstances and the planned responses to those circumstances are described in the Draft HCP.

(2) **Class A Covered Species.** The species identified in Table 1.5-1 of the Draft HCP, but excluding the 25 species identified in Table 3.9-1 of the Draft HCP.

(3) **Class B Covered Species.** The species identified in Table 3.9-1 of the Draft HCP.

(4) **Costs.** All out of pocket costs reasonably incurred by a Party for a specified purpose pursuant to this Agreement, including, but not limited to, financing costs, costs of the Parties' staff, contractors, equipment, and real and personal property. The cost of real property shall be determined by its fair market value as defined in California Code of Civil Procedure §§ 1263.310 *et seq.*

(5) **Covered Activities.** Those activities described as Covered Activities in the Draft HCP.

(6) **Covered Species.** Class A Covered Species and Class B Covered Species.

(7) **Decision Date.** October 10, 2003.

(8) **Draft HCP.** The draft Habitat Conservation Plan dated June 2002 and included in the Final EIR/EIS for the IID Water Conservation and Transfer Project, as certified by the IID Board on June 28, 2002.

(9) **Environmental Litigation Costs.** All Costs reasonably incurred by any Party to defend any litigation involving transactions contemplated by the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement that challenges in whole or in part compliance with applicable environmental laws and regulations or any permit, appraisal, authorization, opinion, assessment or agreement pursuant to any other federal or any state resource protection law or applicable federal or state regulation implementing same.

(10) **Environmental Mitigation Costs.** All Costs reasonably incurred by any Party to satisfy the Environmental Mitigation Requirements. Reasonable attorneys' fees incurred for legal services related to the financing of environmental mitigation expenses shall be included as Mitigation Costs, but no other attorneys' fees incurred by any Party shall be included.

(11) **Environmental Mitigation Requirements.** Any measure required as a result of any Environmental Review Process for activities which are part of or in furtherance of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement or the

Project described in the Final EIR/EIS for the IID Water Conservation and Transfer Project, certified by IID on June 28, 2002, as modified and supplemented by the Addendum thereto dated September 2003, but still including the Draft HCP, the HCP Mitigation Requirements, the transfer of up to 145 KAF in the aggregate as an Interim Surplus Backfill as referenced in the IID/DWR Transfer Agreement, and including the arrangement for ensuring adequate funding to pay for all required measures, but excluding activities and Costs incurred to address:

- (i) Environmental impacts within the CVWD, and SDCWA service areas other than impacts related to the Salton Sea within the CVWD service area;
- (ii) Environmental impacts associated with the All-American Canal and the Coachella Canal lining projects;
- (iii) Environmental impacts associated with the Lower Colorado River, other than impacts that are attributable to the transfer of Conserved Water from IID to SDCWA pursuant to the 1998 IID/SDCWA Transfer Agreement; and
- (iv) Any socioeconomic impacts.

(12) **Environmental Review Costs.** All Costs, including attorneys' fees, reasonably incurred by any Party in connection with any Environmental Review Process. Environmental Review Costs incurred prior to the Agreement Date shall be governed by Section 3.1 and shall not be included in Environmental Mitigation Costs.

(13) **Environmental Review Process.** Any process:

- (i) To conduct environmental review and/or assessment required under CEQA, NEPA and applicable federal, state and agency regulations implementing those statutes;
- (ii) To obtain any permit, approval, authorization, opinion, assessment or agreement pursuant to the Endangered Species Act ("ESA"), the California Endangered Species Act ("CESA"), the Natural Community Conservation Planning Act ("NCCPA"), the state and federal air quality laws, the California Water Code, the public trust doctrine, or any other federal or state environmental resource protection law or applicable federal or state regulations implementing same; and/or
- (iii) To study and/or design any mitigation required to comply with CEQA, NEPA, ESA, CESA, NCCPA, the state and federal air quality laws, the California Water Code, or any other federal or state resource protection law or applicable federal or state regulations implementing same;
- (iv) But not the Lower Colorado River Multi-Species Conservation Program among the States of California, Arizona and Nevada.

(14) **Expected Environmental Mitigation Costs.** The estimated present value costs of satisfying the Environmental Mitigation Requirements, which are stated and described in Exhibit A, attached hereto.

(15) **Expected HCP Mitigation Costs.** That portion of the Expected Environmental Mitigation Costs attributable to the HCP Mitigation Requirements, such Costs being described in Exhibit A.

(16) **HCP Mitigation Requirements.** All Environmental Mitigation Requirements described in Exhibit B attached hereto, and any modified or additional mitigation requirements that may be created pursuant to the HCP described in Section 5 herein. HCP Mitigation Requirements include, but are not limited to, actions to avoid, reduce, minimize, mitigate, or compensate for impacts on Covered Species and their habitat, and also actions to enhance the survival or recovery of the Covered Species.

(17) **Parties' Funds.** Funds required to be provided by the Parties to the QSA-JPA for Environmental Mitigation Requirements in the amounts set forth on Exhibit E.

(18) **Permits.** Collectively, incidental take permits issued by the U.S. Fish and Wildlife Service pursuant to 16 U.S.C. Section 1539(a)(1)(B) and by the California Department of Fish and Game pursuant to Fish and Game Code Sections 2081 and 2835.

(19) **Permit Effective Date.** The date the Permits take effect under applicable laws and regulations.

(20) **Remaining Environmental Mitigation Costs.** Environmental Mitigation Costs in excess of such Costs paid by the Parties' Funds.

(21) **Resource Approval Requirements.** The respective actions and responsibilities of the Parties, as lead agency or otherwise, undertaken in connection with the Resource Approvals contemplated by Section 6.2(2)(ii) of the QSA.

(22) **Review Requirements.** The Environmental Review and assessments undertaken by the respective Parties, as lead agency or otherwise.

(23) **State Obligation.** The amount, if any, of the Environmental Mitigation Costs required to be paid by the State of California pursuant to the QSA-JPA. The Parties understand the State Obligation to be an unconditional contractual obligation of the State of California not dependent on any further State action, and are relying on the State Obligation in order to comply with the extensive state and federal requirements that mandate Environmental Mitigation Requirements. In addition, the Parties are relying on the State Obligation in making contracts with third parties, including without limitation, landowners and farmers in the Imperial Valley who will be entering contracts to produce conserved water.

(24) **State Loan Guarantee.** A binding commitment by the California Infrastructure & Economic Development Bank to unconditionally guarantee the repayment in full of any outstanding debt incurred by the IID to fund capital improvements for the creation of Conserved Water provided for under the QSA and its Related Agreements, in an amount not to exceed One Hundred Fifty Million Dollars (\$150,000,000) in 2003 dollars, in the event that the QSA term ends prior to Year 45 of the QSA or, in lieu of an unconditional guarantee, a reasonable economic equivalent. Such guarantee shall be without any rights of recourse, subrogation, reimbursement, contribution or indemnity against the IID.

(25) **Unexpected Environmental Mitigation Costs.** Any Costs required for satisfaction of Environmental Mitigation Requirements that exceed Expected Environmental Mitigation Costs.

(26) **Unexpected HCP Mitigation Costs.** Any Costs required for satisfaction of HCP Mitigation Requirements that exceed Expected HCP Mitigation Costs.

(27) **Unforeseen Circumstances.** Changes in circumstances affecting a species or geographic area covered by the HCP that could not reasonably have been anticipated by IID at the time of the preparation of the Draft HCP.

(28) **Wildlife Agencies.** Collectively, the U.S. Fish and Wildlife Service ("USFWS") and the California Department of Fish and Game ("CDFG").

1.3. Rules of Construction and Word Usage. Unless the context clearly requires otherwise:

(1) The Recitals to this Agreement are a part of this Agreement to the same extent as the Articles;

(2) The Exhibits attached to this Agreement are incorporated by reference and are to be considered part of the terms of this Agreement;

(3) The plural and singular numbers include the other;

(4) The masculine, feminine, and neuter genders include the others;

(5) "Shall," "will," "must," and "agrees" are each mandatory;

(6) "May" is permissive;

(7) "May not" is prohibitory;

(8) "Or" is not exclusive;

(9) "Includes" and "including" are not limiting;

(10) "Between" includes the ends of the identified range; and

(11) "Person" includes any natural person or legal entity.

ARTICLE 2 ENVIRONMENTAL MITIGATION MANAGEMENT

2.1. Ongoing Review Requirements. The Parties will cooperate and consult with one another with a view to assuring the timely and proper completion of all environmental reviews and assessments.

2.2. Ongoing Resource Approval Requirements.

(1) **Primary Responsibility.** After the Agreement Date, each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to any resource approval shall obtain the prior consent of the other Parties (which consent may not be unreasonably withheld) before entering into a binding agreement with any person, including a Party, which contains terms and conditions pertaining to such approval requiring the incurrence of significant Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely acquisition of all resource approvals.

2.3. Mitigation Implementation Measures.

(1) **Primary Responsibility.** Each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to the acquisition, construction or carrying out of Environmental Mitigation Requirements that will result in Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement shall exercise due care and prudence in the making of any decision and the performance of any activity relating to such measures.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely and proper implementation of all Environmental Mitigation Requirements described in Section 2.3(1) at a reasonable cost consistent with the Parties' interests in minimizing their respective obligations under this Agreement and the public interest.

ARTICLE 3 ENVIRONMENTAL REVIEW AND LITIGATION COSTS

3.1. Environmental Review Costs. Within thirty (30) days after the Agreement Date, CVWD shall pay IID Two Hundred Thousand Dollars (\$200,000). Except for the foregoing, and except as otherwise provided for in this Agreement or as a Party and one or more of the other Parties may otherwise agree under the IID/SDCWA Cost Sharing Protocol or under any other cost sharing protocol or similar written arrangement, each Party shall bear its own Environmental Review Costs incurred prior to or after the Effective Date.

3.2. Environmental Litigation Costs. It is contemplated that the Parties will join in the defense of any environmental litigation pertaining to the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. Each Party shall bear its own Environmental Litigation Costs incurred in connection with any such defense, except as such Party may otherwise agree pursuant to a joint defense agreement between or among one or more of the other Parties pertaining to any such defense and specifying the respective responsibilities of the parties to such agreement, including any cost-sharing with respect thereto.

3.3. Federal Agency Reimbursement Claims. If BOR, the USFWS, or any other federal agency request the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

3.4. California Agency Reimbursement Claims. If the CDFG, or any other California State agency, requests the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements, or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

ARTICLE 4 ENVIRONMENTAL MITIGATION COSTS

4.1. Allocation of Environmental Mitigation Costs.

(1) **In General.** Environmental Mitigation Costs shall be paid to the QSA-JPA from the Parties' Funds in the amounts set forth in Exhibit D and on the schedules attached as exhibits to the QSA-JPA.

(2) **IID Contribution.** IID's total payments of Environmental Mitigation Costs shall not exceed Thirty Million Dollars (\$30,000,000), as described in the 1998 IID/SDCWA Transfer Agreement, as amended as of the Closing Date of the QSA, and paid on the schedule attached to the QSA-JPA. IID shall also pay to the QSA-JPA the Settlement and Efficiency Opportunity Payment as required pursuant to the 1998 IID/SDCWA Transfer Agreement and IID/CVWD Acquisition Agreement on the schedule attached to the QSA-JPA.

(3) **Conditions Precedent.** As of the Closing Date, a binding commitment for the State Loan Guarantee in a form acceptable to the IID, and a binding commitment for the State Obligations in a form acceptable to the Parties shall have been obtained.

4.2. Payment of Unexpected and Remaining Environmental Mitigation Costs.

(1) **Unexpected Environmental Mitigation Costs.** Unexpected Environmental Mitigation Costs shall first be paid from any available Parties' Funds, and then from the State Obligation.

(2) **Remaining Environmental Mitigation Costs.** In the event that the State determines that the costs of Remaining Environmental Mitigation Costs during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement under this Section 4.2(2) would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by the Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected, Unexpected or Remaining Unexpected Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

4.3. Payment and Reimbursement of Environmental Mitigation Costs, as Incurred.

(1) **In General.** Each Party will maintain proper accounting records detailing the Environmental Mitigation Costs paid by it to the QSA-JPA. Except as may otherwise be agreed by the Parties, indirect costs shall not be counted as incurred costs. For purposes of this Agreement, “indirect costs” include, but are not limited to, overhead costs, losses of revenue from any source and other opportunity costs of any kind.

(2) **Quantification of Incurred Costs.** Each Party will provide to the other Parties within 30 days after the end of each calendar quarter a detailed report setting forth the Environmental Mitigation Costs paid by it during such quarter. The form of such report will be as agreed from time to time by the Parties. Each such report will be subject to audit and verification by any Party, at that Party’s expense.

(3) **Costs In the Event of Termination.** If the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement are terminated, the obligation of the Parties’ Funds and of the State to pay for Environmental Mitigation Costs and Remaining Environmental Mitigation Costs attributable to the impacts caused by the Conserved Water transferred or acquired during the term of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement shall continue as long as Environmental Mitigation is necessary to mitigate any continuing impacts that last beyond termination.

(4) In the event that the State determines that the costs of Remaining Environmental Mitigation Costs after termination of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement under this Section 4.3(4) would be reduced if modification were made to IID’s operations or to the operations of a farmer within IID’s service area, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Remaining Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of

different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

In the event that the State determines that the costs referred to in the preceding paragraph could be reduced through modification of the operations of a farmer within the IID service area, the State shall notify IID of the estimated amount of such reduction in costs and shall request that IID request that the farmer take such action and/or modify operations so as to reduce said costs. IID shall thereupon determine whether the requested modification meets the requirements of subparagraphs (i) through (vi) of the preceding paragraph and if it does, shall request that the farmer undertake such modifications. If the farmer fails to undertake such modifications, the State shall not be obligated to pay any such costs to the extent that the requirement for such mitigation could be avoided or reduced by the requested changes.

ARTICLE 5 HABITAT CONSERVATION PLAN

5.1. Approval of HCP. Commencing with the Agreement Date, SDCWA and CVWD, in consultation and collaboration with IID, shall use their best efforts to cause the USFWS and the CDFG to approve, prior to December 31, 2006, a habitat conservation plan/natural community conservation plan ("HCP") and related Permits which satisfy all of the standards and criteria described in Section 5.2. The obligation to utilize such best efforts shall continue except to the extent that coverage of a species is deemed infeasible pursuant to Section 5.4 below. "Best efforts" means the prudent, diligent and good-faith efforts of SDCWA and CVWD to secure the HCP and related Permits as a fiduciary for the benefit of IID, but shall not require the expenditure by SDCWA and CVWD together of more than Five Million Dollars (\$5,000,000) in 2002 dollars to fund third-party consultants tasked with developing the HCP. . CVWD shall not be required to commit its staff and in-house resources in excess of two qualified employee equivalents.

5.2. HCP Standards and Criteria. The HCP and the Permits shall:

- (1) Comply with all applicable requirements of the ESA, CESA and Natural Community Conservation Planning Act;
- (2) Provide IID with the authority to implement the Covered Activities in compliance with ESA and CESA;
- (3) Provide IID with the authority to take the Covered Species incidental to the Covered Activities pursuant to ESA and CESA. Such take authority shall become effective no later than (i) the Permit Effective Date with regard to any Covered Species that is listed as an endangered species or threatened species under ESA as of the Permit Effective Date, (ii) the Permit Effective Date with regard to any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA as of the Permit Effective Date, (iii) immediately upon the listing (and without further action or approval by USFWS) of any other

Covered Species as a threatened species or endangered species pursuant to ESA after the Permit Effective Date, and (iv) immediately upon the listing (and without any further approval action or approval by CDFG) of any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA after the Permit Effective Date;

(4) Have a term of years not less than forty-five (45) years from the Permit Effective Date, except that coverage for the white pelican, black skimmer, and double-crested cormorant may be limited to a term of fifteen (15) years from the Permit Effective Date;

(5) Not impose on IID, or otherwise require IID to fund, support or implement, any Environmental Mitigation Requirements other than the HCP Mitigation Requirements described on Exhibit A. In no event shall IID be obligated to pay for any Costs of complying with or implementing the HCP or complying with the Permits, in excess of Section 4.1(2) or other limitation on IID's obligation to pay for mitigation costs.

(6) Include an Implementation Agreement among IID and the Wildlife Agencies that describes the rights and obligations of IID and the Wildlife Agencies with regard to the implementation of the HCP. The Implementation Agreement shall, at a minimum, include the following covenants in a form that is valid, binding and enforceable by IID:

(i) In the event of Unforeseen Circumstances, USFWS and CDFG will not require from IID the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources with regard to the impacts of the Covered Activities on the Covered Species;

(ii) Except for the HCP Mitigation Requirements described on Exhibit A, no limitations or restrictions shall be imposed on IID, either directly or indirectly, by USFWS or CDFG with regard to the impacts of the Covered Activities on the Covered Species or with regard to the impacts on the Covered Species attributable to Changed Circumstances;

(iii) USFWS shall agree that the Section 10(a) Permit shall constitute a Special Purpose Permit under 50 CFR section 21.27, for the take of all Covered Species identified at 50 CFR section 10.13, excluding bald eagles which are listed under ESA as of the Effective Date. The Special Purpose Permit shall be valid for a period of three (3) years from its Effective Date, provided the Section 10(a) Permit remains in effect for such period. The Special Purpose Permit shall be renewed, provided the IID remains in compliance with the terms of the Implementation Agreement and the Section 10(a) Permit. Each such renewal shall be valid for a period of three years, provided that the Section 10(a) Permit remains in effect for such period. USFWS will not refer the incidental take of any bald eagle, *Haliaeetus leucocephalus*, for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the Mitigation Requirements;

(iv) In any consultation that may be required or processed pursuant to Section 7 of ESA (16 U.S.C. section 1536(a)) with regard to the Covered Activities

analyzed in the ESA intra-Service Section 7 consultation for the HCP, the USFWS shall, to the maximum extent appropriate and permitted by law, rely upon, and utilize, the ESA biological opinion completed with regard to analysis of the HCP and, if appropriate, programmatic Section 7 opinions governing Covered Species;

(v) In the event that a critical habitat determination is made for any Covered Species, no additional Mitigation shall be required of IID that is in addition to the Mitigation Requirements; and.

(vi) Neither USFWS or CDFG shall suspend or revoke any of the Permits without first conducting a formal adjudicatory hearing substantially in accordance with the procedures applicable to hearings conducted pursuant to Sections 554-556 of the federal Administrative Procedure Act to the extent permitted by applicable law.

(7) Be authorized by complete and final environmental documentation pursuant to CEQA and NEPA.

5.3. Exceptions. Notwithstanding the provisions of Sections 5.1 and 5.2, above, SDCWA and CVWD shall not be required to provide coverage under the HCP for certain Covered Species if such coverage is deemed infeasible. Coverage shall be deemed infeasible under the following circumstances:

(1) As to Class B Covered Species, if, as of June 1, 2005, despite the best efforts of SDCWA and CVWD (i) the Wildlife Agencies determine (by final agency action) that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the Expected HCP Mitigation Costs;

(2) As to Class A Covered Species, SDCWA and CVWD shall have utilized their continuous best efforts until December 31, 2005, to obtain coverage for such species, but (i) the Wildlife Agencies have determined (by final agency action) as of December 31, 2006, that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the total amount of Expected HCP Mitigation Costs described in Exhibit A. In the event that IID is relieved of all obligations under applicable law and regulation to undertake some portion of the HCP Mitigation Requirements described in Exhibit B, the amount of Expected HCP Mitigation Costs for purposes of this Section 5.3 shall be adjusted to reflect any change in said requirements.

5.4. Revival of Efforts. In the event that coverage of a Class A or Class B Covered Species is deemed infeasible as of December 31, 2006, and June 1, 2005, respectively, pursuant to subsection 5.3(i) and (ii) above, and if new information becomes available which indicates

that approval of coverage of that species by the Wildlife Agencies is feasible and within the budget of Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), SDCWA and CVWD shall revive their best efforts to obtain coverage for that species.

5.5. Modifications to IID Operations. In the event that SDCWA and CVWD determine that the cost of satisfying the requirements of subsections 5.1 and 5.2, above, would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by USFWS and CDFG and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected HCP Mitigation Costs;

(v) The modification does not require a change in operations by any individual farmer(s);

(vi) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vii) If the modification involves terminating or reducing the operation of a capital project, then the affected owner/operator (IID or a farmer) has reasonably determined that the termination/reduction will not adversely affect its operations or farming, compared to conditions prior to the termination/reduction of operations.

5.6. Breach of Agreement. Any failure of the IID, SDCWA or CVWD to satisfy its respective obligations described in this Article 5 shall constitute a material breach of this Agreement. The Parties shall utilize the procedures of Sections 7.1 and 7.3 to resolve any dispute regarding the existence of a material breach under this Section.

5.7. Compliance with Laws. IID shall have the right, at any time during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, to cease any activity if IID, acting in good faith and after receiving a written notification or warning, determines that continuation of such activity will: (i) violate ESA, CESA, any regulations or

orders promulgated pursuant thereto, the terms and conditions of any ESA or CESA permit, approval or agreement; or (ii) otherwise violate applicable state, federal or local laws, ordinances or regulations, unless IID is immune from such liability pursuant to statute. Prior to making such determination, if circumstances permit, IID shall consult with the other Parties to this Agreement and with the Wildlife Agencies, and other agency with the authority to enforce the statute, regulation, permit, order or approval that is the subject of the proposed IID determination. IID shall not cease the activity if the agency with jurisdiction to enforce the applicable statute, regulation, permit, order or approval, provides IID with adequate assurances, in writing, that the continuation of the activity will not violate the applicable statute, regulation, permit, order or approval. IID must utilize a substitute activity for the ceased activity, if such substitute is environmentally, physically and economically available. Any additional costs for the substitute activity shall be treated as an Unexpected HCP Mitigation Cost.

ARTICLE 6 CONTRACT ADMINISTRATION

6.1. Contract Managers.

(1) **Designation of Contract Managers.** In order to facilitate and implement this Agreement, the contract manager designated by each Party herein shall be responsible for managing and implementing that Party's performance hereunder. Any Party may change its designated contract manager at any time by prior written notice to the other Parties. The initial contract managers are:

For CVWD: Steve Robbins

For IID: Tina A. Shields

For SDCWA: Larry Purcell

(2) **Communications.** All correspondence, notices or other matters related to this Agreement, including payments, shall be directed to the appropriate contract manager designated above.

(3) **Administrative Protocols.** The contract managers will develop and amend from time to time written administrative protocols, subject in each case to the approval of the Parties or their delegates.

ARTICLE 7 DISPUTES

7.1. Disputes Among or Between the Parties. The Parties or their delegates shall seek to resolve any dispute concerning the interpretation or implementation of this Agreement through negotiation involving, as and when appropriate, the general manager or chief executive officer of each of the Parties. Any unresolved dispute among or between CVWD, IID and/or SDCWA under Articles 4 and 5 of this Agreement shall be resolved pursuant to Section 7.3. Any other unresolved dispute among or between Parties under this Agreement shall be resolved

by litigation pursuant to Section 7.2. The Parties consent to suit in Federal court to enforce the terms of this Agreement.

7.2. Action or Proceeding Between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to being transferred to a "Neutral County," or instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding. Each party therefore:

(1) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;

(2) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;

(3) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and

(4) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

Nothing in this section, however, impairs or limits the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

7.3. Resolution of Arbitration Disputes. Disputes among or between Parties under Articles 4 and 5 of this Agreement shall be resolved pursuant to the provisions of this Article.

(1) Any dispute which cannot be resolved by consensual agreement shall be resolved through binding arbitration by a panel of arbitrators in an arbitration proceeding conducted in a Neutral County, or such other location as the Parties may agree. Arbitration proceedings may be initiated by any Party sending a demand for arbitration to the other Parties in conformance with the Notice provisions of this Agreement. The Parties shall impanel a group of three (3) arbitrators by each selecting an arbitrator of its choice who shall then select the third (3rd) member of the panel. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. Prior to the commencement of proceedings, the appointed arbitrators will take an oath of impartiality. The Parties shall use their reasonable best efforts to have the arbitration proceeding concluded within ninety (90) Business Days.

(2) In rendering their determination, the arbitrators shall determine the rights and obligations of the Parties according to the substantive and procedural laws of California. All discovery shall be governed by the CCP with all applicable time periods for notice and scheduling provided therein being reduced by one-half (1/2). The arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding

compliance with discovery requests shall be decided by the arbitrators. A decision by two (2) of three (3) arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

(3) The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party(ies) against whom the decision is rendered. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the costs of the other Party(ies).

ARTICLE 8 GENERAL PROVISIONS

8.1. Term. This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date, except that the requirements of Section 4.3(5) shall survive the Termination Date.

8.2. Amendment. This Agreement may be amended only by a written instrument signed by the IID, SDCWA and CVWD.

8.3. Attorneys' Fees. If any Party commences a legal proceeding for any relief against any other Party to this Agreement arising out of this Agreement, the losing Party shall pay the prevailing Party's legal costs and expenses, including, but not limited to, reasonable attorneys' fees and court costs, except as may otherwise be specified in the decision or order entered in said proceeding.

8.4. Authority. Each Party represents and warrants that: (i) it has the requisite power and authority to enter into and perform its obligations under this Agreement; (ii) the individuals executing this Agreement on its behalf are the duly authorized agents of such Party and are authorized to do so under the Party's governing documents; and (iii) the terms of this Agreement are binding upon and enforceable against such Party in accordance with its terms.

8.5. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of which, taken together, shall constitute one and the same Agreement after each party has signed such a counterpart.

8.6. **Effective Date.** This Agreement shall be effective on the Effective Date of the QSA.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the Date first written above.

"CVWD"

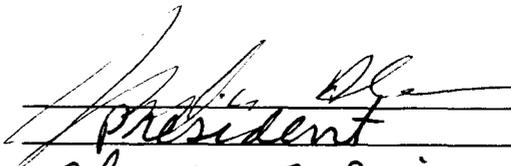
COACHELLA VALLEY WATER DISTRICT

By: 

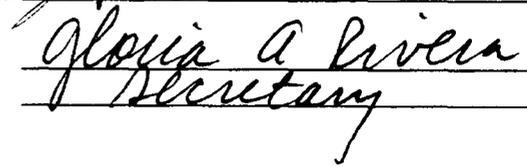
Title: GENERAL MANAGER

"IID"

IMPERIAL IRRIGATION DISTRICT

By: 

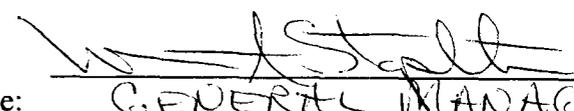
Title: President

By: 

Title: Secretary

"SDCWA"

SAN DIEGO COUNTY WATER AUTHORITY

By: 

Title: GENERAL MANAGER

EXHIBIT A

General Notes

1. Except as noted, all costs are in year 2002 dollars. Future costs have been discounted 3% for present value estimates.
2. Costs for each measure include 3 phases: 1) design/permitting, 2) implementation/construction, and 3) operations & maintenance for the 45 year project period.
3. Costs for each measure are dependent on the specific timing and duration for each phase. Phases were initiated when necessary to provide offsets for expected impacts.
4. Stabilization of the receding Salton Sea shoreline utilizes gravel cover. Costs for alternative measures could vary substantially.
5. No costs are included for any unknown future mitigation measures that might arise from required studies.
6. No specific sites for habitat creation measures have been identified. Costs are planning estimates only and may change depending upon location, local economic conditions, final design, etc.
7. No additional commitment of land, water or other resources is required for adaptive management.
8. Attempts have been made to eliminate duplication of costs among measures.
9. Supporting documentation for each cost estimate is available at CVWD, IID, MWD, and SDCWA.

Estimated HCP Costs

Condition No	Mitigation Measure	Present Value In Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost Items
General - 1	Hire full-time biologist to manage HCP and participate on HCP Implementation Team.	3,678	First year O&M \$150,000. Begins in 2003.
General - 2	Convene and facilitate HCP IT.	270	Reimbursement for CDFG and USFWS participation on HCP IT. IID biologist participation addressed in General-1. Begins in 2003.
Salton Sea - 2	Pupfish refugium pond.	340	Pond creation to be implemented at end of 15 Year Minimization Plan.
Salton Sea - 3	Tamarisk scrub habitat surveys and creation.	11,132	Surveys and habitat replacement to begin at end of 15 Year Minimization Plan. Maximum creation assumes 1321 acres.
Tree Habitat - 1	Tree habitat surveys and creation.	751	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 34.1 acres.

Tree Habitat - 2	Seepage community surveys and creation.	644	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 30 acres.
Tree Habitat - 3	Site surveys for construction scheduling.	7	Surveys to begin at start of efficiency conservation in 2008.
Drain Habitat - 1	Creation of managed marsh habitat.	23,682	73 acres to be implemented in 2003, 117 acres to be implemented at start of efficiency conservation period in 2008, plus the balance of 462 acres to be constructed starting in 2017. The maximum total acreage is 652. Water to sustain marsh is included at 12AF/acre/year with 50% from existing drainage and 50% from purchased irrigation water. Irrigation water assumed at \$16/AF. Redundant with SWRCB order.
Drain Habitat - 2	Avoid dredging river deltas between Feb.15 and Aug. 31.	0	No additional costs assumed for scheduling of maintenance dredging.
Drain Habitat - 3	Site surveys to avoid construction disturbance of covered species.	0	No additional costs assumed for crews to survey areas for wildlife prior to beginning work.
Desert Habitat - 1	Worker education program - training and materials.	37	Begins in 2003.

Desert Habitat - 2	Precautions for workers during O&M of canals and drains.	38	Begins in 2003.
Desert Habitat - 3	Habitat surveys, construction monitoring, and vegetation restoration.	436	Begins in 2003.
Desert Habitat - 4	Habitat surveys and update worker manual.	476	Habitat surveys and worker training manual to begin in 2003.
Desert Habitat - 5	Desert habitat acquisition and management.	118	Habitat acquisition and management to begin at start of efficiency conservation in 2008. Maximum acquisition assumes 100 acres.
Owl - 1	Worker education program for canal and drain maintenance.	60	Begins in 2003. Some possible redundancy with Desert Habitat-1.
Owl - 2	Visual inspection of banks. Mark burrows. Develop standard operating procedures.	920	Operating procedures develop in 2006. Habitat protection measures begin at start of efficiency conservation period in 2008.
Owl - 3	Precautions for grading of spoils near canals and ditches.	0	No additional cost assumed for taking precautions during grading of spoils.
Owl -4	Avoid disturbing burrows. Fill burrows to maintain channel.	2,014	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 5	Manage location and schedule of facility construction.	60	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 6	Maintain current techniques for canal and drain maintenance.	0	No additional cost assumed to maintain current techniques.
Owl - 7	Owl abundance, distribution, and demographic surveys.	532	Begins in 2003.

Owl - 8	Avoid disturbing burrows. Replace impacted burrows at 2:1 ratio.	344	Habitat replacement to begin at start of efficiency conservation period in 2008.
Owl - 9	Farmer and public education program.	43	Begins in 2003.
Pupfish - 1	Maintain current levels of pupfish habitat.	862	Habitat maintenance to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 2	Minimize selenium impacts on pupfish.	4,383	Drain channel management to begin at start of efficiency conservation in 2008. Redundant with SWRCB order.
Pupfish - 3	Modifications to increase amount of pupfish drain habitat.	3,658	Habitat creation to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 4	Protocol for surveys to monitor pupfish presence.	863	Protocol developed by start of efficiency conservation period in 2008.
Pupfish - 5	Evaluate effect of drain maintenance on pupfish.	45	Study begins at start of efficiency conservation period in 2008.
Pupfish - 6	Gradual dewatering and salvage of stranded pupfish.	3,469	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Razorback Suckers - 1	Salvage fish and return to Colorado River.	40	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.

Agriculture - 1	Install markers on tailwater pump power lines.	40	Marker installation begins at start of efficiency conservation period in 2008.
Agriculture - 2	Plant and maintain cover crops or ridge till lands to conserve water.	360	Begins in 2003.
Other Species - 1	Implement species surveys and submit study program.	738	Begins in 2003.
Other Species - 2	Implement impact avoidance and minimization measures.	817	Begins in 2004.
Monitoring and Adaptive Management	Monitoring and adaptive management described in Chapter 4 of draft HCP.	0	Costs included in individual measures listed above are assumed to cover adaptive management.
TOTAL HCP		60,857	

Estimated 2002 Biological Opinion Portion of HCP Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) Yr 45	Notes and explanation of zero-cost Items
15 Year Minimization Plan	Acquire and discharge water to the Salton Sea.	50,000	Water to avoid material change in Salton Sea elevation and salinity for 15 years. Redundant with SWRCB order.
Pupfish CM 2	Pupfish selenium toxicity study. Pupfish and selenium monitoring. Develop mitigation. Study of sources and management of selenium.	939	Begins in 2003. Includes selenium studies required by SWRCB.
Willow Flycatcher CM 1	Willow flycatcher breeding habitat evaluation.	228	Habitat surveys to begin at start of efficiency conservation period in 2008.
Willow Flycatcher CM 2	Habitat monitoring and replacement.	733	Habitat monitoring and replacement to begin at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 3	Long-term monitoring plan.	24	Management plan developed at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 4	Willow flycatcher take evaluation.	0	Addressed by Willow Flycatcher CM 1.
Brown Pelican CM 2	Roost site creation and monitoring.	1,175	No Year 1 capital cost; habitat creation to be implemented in 2009.
TOTAL 2002 BO		53,099	

Estimated CEQA Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost Items
Water Quality			
WQ-2	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-4	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-5	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-7	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
QSA-WR-1	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
	Water Quality Subtotal	0	

Agricultural Resources			
AR-1	Prohibit use of non-rotational fallowing. Otherwise, no mitigation measures.	0	No costs for prohibiting use of non-rotational fallowing.
QSA-AR-1	Non-fallowing conservation measures or short term fallowing.	0	Addressed by measure AR-1.
SWRCB-HCP-AR-2	Conversion of up to 700 acres of prime farmland to create habitat.	0	Mitigation determined infeasible. Significant and unavoidable impact.
SWRCB-AR-1	Reclassify up to 50,000 acres of prime farmland or farmland of statewide importance.	0	Addressed by AR-1.
Agricultural Resources Subtotal		0	
Recreation			
R-7	Temporary and permanent relocation of boat launch facilities.	1,600	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 8 boat launch facilities relocated every 3 years through 2040 as necessary.
R-10	Temporary and permanent relocation of camping facilities.	2,889	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 88 campsites relocated every 6 years through 2040 as necessary.
QSA-RR-3	Relocation of Salton Sea recreation facilities or use of Conserved Water.	0	Addressed by measures R-7 and R-10.
SWRCB-R-7	Temporary and permanent relocation of boat launching facilities.	0	Addressed by R-7.
SWRCB-R-8	Reduced sportfishing opportunities.	0	Addressed by 15 Year Minimization Plan.

SWRCB-R-9	Implement SSHCS to avoid salinity impacts.	0	Addressed by 15 Year Minimization Plan and Salton Sea 2.
SWRCB-R-10	Temporary and permanent relocation of campgrounds and ancillary facilities.	0	Addressed by R-10.
	Recreation Subtotal	4,489	

Air Quality			
AQ-2	Minimize PM10 emissions during construction and operation of efficiency conservation measures.	1,650	Begins in 2008. Redundant with SWRCB order.
AQ-3	Minimize PM10 emissions during fallowing through conservation measures, soil stabilization, etc.	14,895	Cost includes first year fallowing of 2,500 acres. Begins in 2003.
AQ-4	General conformity determination.	12	Begins in 2008.
AQ-7	Access restriction, research, monitoring. Obtain emission offsets and [or] direct emission reductions at the Sea.	36,774	Monitoring and research begins in 2008. Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan, and be implemented continuously for 20 years.
EJ-2	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
EJ-3	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
QSA-AQ-1	Construction SOPs and agricultural BMPs for dust control.	0	SOPs addressed in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-2	Construction BMPs for NOx, fugitive dust.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-3	Fugitive dust from decline in Salton Sea levels.	0	Addressed by AQ-7.
SWRCB-AQ-3	Dust control measures.	0	Addressed by AQ-3.

SWRCB-AQ-7	Access restriction, research, monitoring. Obtain emission offsets and direct emission reductions at the Sea.	0	Addressed by AQ-7.
Air Quality Subtotal		53,331	
Cultural Resources			
CR-1	Cultural resource surveys prior to construction of water conservation measures.	31	Surveys to begin in 2003. Assumes preconstruction surveys for 100 sites over a 15 year period with 5 sites requiring testing and recovery.
CR-2	Protect cultural resources during construction and operation.	0	Addressed by CR-1.
CR-5	Protect cultural resources during reduced flow to Salton Sea. Conduct archaeological surveys.	87	Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan.
ITA-1	Control of public access on exposed tribal lands.	0	Addressed by CR-5.
QSA-CR-3	Cultural Resource Surveys.	0	Addressed by CR-5.
Cultural Resources Subtotal		118	

Noise			
N-1	Permanent or temporary sound barriers for construction noise sources.	13	Barriers constructed at start of efficiency conservation period in 2008.
N-2	Permanent sound barriers for pumps in noise-sensitive areas.	15	Barriers constructed at start of efficiency conservation period in 2008.
N-3	Permanent sound barriers for interceptor pumps in noise-sensitive areas.	3	Barriers constructed at start of efficiency conservation period in 2008.
N-4	Permanent or temporary sound barriers for noisy equipment.	0	Addressed by N-1 through N-3.
QSA-N-1	Construction BMPs, sound barriers.	0	Addressed by N-1.
	Noise Subtotal	31	

Geologic Resources			
QSA-GSM-1	Minimize soil erosion through watering, paving, limiting vehicle speeds, crusting agents, and construction monitoring.	1,999	Includes storm water planning and related BMPs. PM10 dust control elements addressed by AQ-2.
QSA-GSM-3	Construction BMPs for soil erosion. Monitor water levels for risk of liquefaction.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2, AQ-3 and QSA-GSM-1.
Geologic Resources Subtotal		1,999	
Hazards			
QSA-HHM-1	Assess impacts on local emergency response plans. Complete Phase I studies for potential contamination.	268	Assessment to be implemented at start of efficiency conservation period in 2008. Assumes 10 sites require assessment and 5 sites require a Phase 1 audit.
Hazards Subtotal		268	
Aesthetics			
A-1	Relocate recreation facilities and develop interpretive facilities and materials.	0	Costs addressed in measures R-7 and R-10.
SWRCB-A-1	Aesthetic impacts from drop in Salton Sea level.	0	Addressed by 15 Year Minimization Plan and A-1.
Aesthetics Subtotal		0	
TOTAL CEQA		60,236	

Estimated CESA 2081 Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2003) Yr 45	Notes and explanation of zero-cost Items
Backwater/Marsh	Create and maintain 16.25 acres of marsh and backwater habitat	1,268	Begins 2003, to be completed within 5 years
TOTAL CESA 2081		1,268	

Note: CESA LCR 2081 cost estimate is for mitigation acreage and actions that are in addition to those required in the 2001 Lower Colorado River BO, and assumes that BO measures will be acceptable as satisfaction of comparable 2081 requirements.

Estimated 2001 Lower Colorado River BO Costs

Condition No	Mitigation Measure	Present Value In Thousands (\$2001) - Yr 45	Notes and explanation of zero-cost Items
Conservation Measure 1	Stock 10,000 sub-adult razorback suckers into the Colorado River	*	Included in funding agreement
Conservation Measure 2	Create, restore, and maintain 38.25 acres of marsh and backwater habitat	*	Included in funding agreement
Conservation Measure 3	Fund the capture of wild-born or F1 generation bonytails	*	Included in funding agreement
Conservation Measure 4	Restore and maintain 186 acres of southwestern willow flycatcher habitat along the LCR between Parker and Imperial Dams	*	Included in funding agreement
TOTAL 2001 BO		3,000	

* Mitigation Measures shall be accomplished through an agreement with the U.S. Bureau of Reclamation, under which Reclamation shall undertake all required measures in the 2001 LCR BO attributable to the transfer of 200,000 AFY in return for payment of \$3 million in 2001 dollars.

EXHIBIT B

EXHIBIT B

HCP Mitigation Requirements

The HCP Mitigation Requirements include the following measures and requirements, all as described in greater detail in the June 2002 Draft HCP and the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service, as applicable:

June 2002 Draft HCP:

General – 1

General – 2

Salton Sea – 2

Salton Sea – 3, except that the survey of the areas designated as shoreline strand and adjacent wetland shall commence in 2018.

Tree Habitat – 1; Tree Habitat – 2; Tree Habitat – 3

Drain Habitat – 1; Drain Habitat – 2; Drain Habitat – 3

Desert Habitat – 1; Desert Habitat – 2; Desert Habitat – 3; Desert Habitat – 4; Desert Habitat – 5

Owl – 1; Owl – 2; Owl – 3; Owl – 4; Owl – 5; Owl – 6; Owl – 7; Owl-8; Owl-9

Pupfish -1; Pupfish -2; Pupfish – 3; Pupfish – 4; Pupfish – 5; Pupfish –6;

Razorback Suckers – 1

Agriculture – 1; Agriculture – 2

Other Species – 1

Other Species – 2

The monitoring and adaptive management requirements described in Chapter 4 of the Draft HCP.

2002 Biological Opinion

The 15-Year Minimization Plan described on page 17-18 of the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service

Pupfish Conservation Measure 2

Willow Flycatcher Conservation Measures 1, 2, 3, and 4

Brown Pelican Conservation Measure 2

Exhibit D

Use of Party Funds

<i>Expenditure</i>	<i>Millions (present value as of 2003)</i>
Environmental Mitigation Requirements	
Salinity Control of Salton Sea	\$ 50.0
Other Environmental Mitigation Requirements	<u>\$ 83.0</u>
Total Environmental Mitigation Requirements	\$133.0

Exhibit E

Party Commitments to Fund Environmental Mitigation Costs

<i>Party</i>	<i>Amount (present value as of 2003)</i>
Imperial Irrigation District	\$44,061,350
Coachella Valley Water District	\$36,717,791
San Diego County Water Authority	\$52,220,859
TOTAL	\$133,000,000

AGREEMENT FOR ACQUISITION OF CONSERVED WATER

by and between

IMPERIAL IRRIGATION DISTRICT,

a California irrigation district ("IID"),

and

COACHELLA VALLEY WATER DISTRICT,

a California county water district

("CVWD")

Dated: October 10, 2003

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AGREEMENT FOR ACQUISITION OF CONSERVED WATER BETWEEN IMPERIAL IRRIGATION DISTRICT AND COACHELLA VALLEY WATER DISTRICT

THIS AGREEMENT FOR ACQUISITION OF CONSERVED WATER ("**Agreement**") is made and entered into by IMPERIAL IRRIGATION DISTRICT, a California irrigation district ("**IID**"), and COACHELLA VALLEY WATER DISTRICT, a California county water district ("**CVWD**"), as of October 10, 2003. IID and CVWD are sometimes referred to individually as a "**Party**" and collectively as the "**Parties**."

R E C I T A L S:

A. IID is an irrigation district organized under the California Irrigation District Law, codified at §§ 20500 et seq. of the California Water Code, and delivers Colorado River water in Imperial County, California for irrigation and potable purposes.

B. CVWD is a county water district organized under the California County Water District Law, codified at §§ 30000 et seq. of the California Water Code, and delivers Colorado River water in Riverside County, California for irrigation and potable purposes.

C. This Agreement is one of several agreements executed and delivered as of the date hereof by the Parties and by other agencies, including Metropolitan Water District ("**MWD**"), pursuant to the Quantification Settlement Agreement among the Parties and MWD dated as of October 10, 2003 (the "**QSA**"), which settles a variety of long-standing disputes regarding the priority, use, and transfer of Colorado River water and establishes the terms for the further distribution of Colorado River water among these entities for up to seventy-five years based upon the water budgets set forth therein.

D. IID will cause Water Conservation Efforts (defined below) to be undertaken in exchange for payments to be made by CVWD.

E. This Agreement provides for the voluntary acquisition of Conserved Water from IID by CVWD.

F. CVWD is willing to make payments to IID in order to acquire Conserved Water created by IID's Water Conservation Efforts.

G. The purpose of this Agreement is to set forth the terms and conditions under which CVWD will make payments to IID for the acquisition of a specified quantity of Conserved Water, in accordance with the QSA.

H. Although the Parties intend to act in accordance with this Agreement, they do not intend to, and under the Agreement do not in any way, transfer, assign, encumber, or grant to each other any ownership interest in or control over any of each other's water rights, and do not intend to limit or waive their respective rights following termination of the Agreement.

I. The Parties intend that this Agreement shall become effective, and the activities described herein shall commence, only after compliance with the California Environmental

Quality Act, California Public Resources Code §§ 21000 et seq. ("CEQA"), and the National Environmental Policy Act, Title 4, United States Code §§ 4321 et seq. ("NEPA"), as applicable.

A G R E E M E N T:

NOW THEREFORE, in consideration of the covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, IID and CVWD agree that the terms and conditions of this Agreement are as follows:

ARTICLE 1

DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Incorporated Definitions. The terms with initial capital letters that are used in this Agreement shall have the same meaning as set forth in Section 1.1 of the QSA, unless the context otherwise requires.

1.2 Additional Definitions. As used in this Agreement, in addition to the QSA defined terms, the following terms shall have the meanings set forth below:

- (1) **Adjustment Notice.** As defined in Section 3.4.
- (2) **Contracting Landowner.** A Landowner that has contracted with IID to undertake Water Conservation Efforts and reduce its use of Colorado River water.
- (3) **Due Date.** As defined in Section 6.1(1).
- (4) **Environmental Review Process Costs.** As defined in the Environmental Cost Sharing Agreement ("ECSA").
- (5) **Environmental Mitigation Costs.** As defined in the ECSA.
- (6) **Event of Default.** As defined in Article 15.
- (7) **First Fifty Thousand Acquisition.** As defined in Section 3.1.
- (8) **Landowner.** A legal owner of real property located within the jurisdictional boundary of IID.
- (9) **Late Payment Charge.** As defined in Section 6.3.
- (10) **Make Available (and grammatical variations thereof).** Conserved Water will be deemed to have been Made Available to CVWD in any Year hereunder by means of IID's corresponding reduction in that Year of its Consumptive Use at Imperial Dam in an amount equal to the Conserved Water to be acquired hereunder in that Year by CVWD.
- (11) **NEPA.** As defined in Recital I.

- (12) **Occasional Reduction Notice**. As defined in Section 3.5(5).
- (13) **Permanent Reduction Notice**. As defined in Section 3.7.
- (14) **Postponement Notice**. As defined in Section 3.3.
- (15) **QSA**. As defined in Recital C.
- (16) **Second Fifty-Three Thousand Acquisition**. As defined in Section 3.2.
- (17) **Shortfall**. As defined in Article 11.
- (18) **Term**. As defined in Article 4.
- (19) **Water Conservation Efforts**. The activity, program or project used to generate Conserved Water.

1.3 **Rules of Construction and Word Usage**. The provisions of Section 1.2 of the QSA are incorporated herein by reference, unless the context requires otherwise.

ARTICLE 2

BASIC PROVISION

Subject in all events to the specific terms and conditions of this Agreement:

(a) IID will compromise certain positions and cause Water Conservation Efforts to be undertaken (by IID or by contracts with Landowners) to create Conserved Water for acquisition by CVWD and reduce the Consumptive Use of Colorado River water by IID.

(b) CVWD will compromise certain positions, acquire Conserved Water from the IID, use such Conserved Water for CVWD Improvement District No. 1 (subject to Section 3.6 below), and pay IID for the Conserved Water available for acquisition.

(c) IID and CVWD agree that at the termination of this Agreement, neither the terms of the Agreement nor the conduct of the Parties in performance of this Agreement confers upon the other any legal or equitable rights that would not have existed in the absence of this Agreement and the Parties' performance thereunder.

ARTICLE 3

ACQUISITION QUANTITY

3.1 **First Fifty Thousand Acquisition**. Subject to Sections 3.3 and 3.4 below, the quantity of Conserved Water acquired by CVWD during the Calendar Year 2008 shall be four thousand (4,000) AF and shall ramp up by four thousand (4,000) AFY each year thereafter until Calendar Year 2010, at which time it shall ramp up by five thousand (5,000) AFY each year

thereafter, except that in Calendar Year 2016 it shall ramp up by eighteen thousand (18,000) AFY. Once fifty thousand (50,000) AFY of conserved water is created and acquired, it shall constitute the "**First Fifty Thousand Acquisition**". Thereafter, subject to the Occasional or Permanent Reduction provisions of Sections 3.5 and 3.7 below, the First Fifty Thousand Acquisition shall remain at fifty thousand (50,000) AFY.

3.2 Second Fifty-Three Thousand Acquisition. Commencing in the Year following the end of the ramp-up for the First Fifty Thousand Acquisition and subject to Section 3.4 below, the quantity of Conserved Water acquired by CVWD shall be five thousand (5,000) AF and shall ramp-up by five thousand (5,000) AFY each year thereafter until an additional acquisition of fifty-three thousand (53,000) AFY is reached (the "**Second Fifty-Three Thousand Acquisition**"). Thereafter, subject to the Occasional or Permanent Reduction provisions of Sections 3.5 and 3.7 below, the aggregate First Fifty Thousand and Second Fifty-Three Thousand Acquisitions shall total and remain at one hundred and three thousand (103,000) AFY. A schedule illustrating the First Fifty Thousand and Second Fifty-Three Thousand Acquisitions, without application of Sections 3.3-3.5 and 3.7 below; is attached hereto as Exhibit A.

3.3 Postponement of First Fifty Thousand Acquisition. CVWD may from time to time postpone the first year of the First Fifty Thousand Acquisition ramp-up to any Calendar Year between Calendar Year 2008 and Calendar Year 2016 by providing written notice to IID at least two (2) years prior to the January 1 of the year which would otherwise be the first year. More than one postponement is permissible, but no notice may be given after December 31, 2013. The notice shall identify the year other than 2008 that will be the new first year of the First Fifty Thousand Acquisition (the "**Postponement Notice**").

3.4 Adjustment to Ramp-Up of First and Second Fifty-Three Thousand Acquisitions. After the First Fifty Thousand Acquisition has commenced, and provided that written notice is provided to IID at least one (1) year prior to the January 1 for the Calendar Year to be adjusted, CVWD may reduce an annual ramp-up step to either three thousand (3,000) AFY or four thousand (4,000) AFY. The notice shall specify the amount and number of years for the adjustment (the "**Adjustment Notice**"). CVWD may provide an Adjustment Notice more than one time, but only one Adjustment Notice is permitted for any given year.

3.5 Occasional Reductions to First or Second Fifty-Three Thousand Acquisitions. CVWD shall have a limited right to occasionally reduce the amount of Conserved Water acquired in the First Fifty Thousand or Second Fifty-Three Thousand Acquisitions from IID. This limited right is subject to the following terms and conditions.

(1) **Availability.** The occasional reductions may occur only during the period between the first year of the First Fifty Thousand Acquisition and two (2) years after the end of the ramp-up for the Second Fifty-Three Thousand Acquisition.

(2) **Annual Reduction Amount.** The occasional reductions shall be in a volume comprised of one or more increments of five thousand (5,000) AF.

(3) **Aggregate Reduction Maximum.** CVWD may not reduce its acquisition of Conserved Water by more than one hundred thousand (100,000) AF in the aggregate during any rolling ten (10)-year period.

(4) **Frequency.** CVWD may not exercise its limited right to an occasional reduction in more than three (3) years in any rolling ten (10)-year period nor more than three (3) years in succession.

(5) **Notice.** CVWD shall provide written notice (the "**Occasional Reduction Notice**") to IID at least one year prior to the January 1 of any Calendar Year in which the occasional reduction is to take place. Said notice is to specify the Annual Reduction Amount and number of years and contain sufficient information for IID to determine CVWD's compliance with availability, aggregate maximum, and frequency limitations.

3.6 IID Use or Transfer of Non-Acquired Conserved Water. IID shall have the right to use, transfer or Make Available to MWD Conserved Water occasionally not acquired by CVWD, subject to applicable restraints under then existing law. IID shall make reasonable efforts to lawfully use or transfer Conserved Water occasionally not acquired by CVWD to the extent such Conserved Water is not Made Available to MWD pursuant to Article 5 of the IID/MWD Acquisition Agreement. If IID reasonably chooses to use some or all of the non-acquired Conserved Water, CVWD shall be relieved of its payment obligations for the volume used by IID. If IID Makes Available to MWD or lawfully transfers to some other transferee some or all of the Conserved Water occasionally not acquired by CVWD, CVWD will be relieved of its payment obligation in an amount equal to the value of the consideration received by IID in exchange for the transferred Conserved Water; provided, however, that in no event will CVWD have any right to share in or receive any payment as a result of IID's transfer of the Conserved Water. CVWD will also be relieved of its payment obligation to the extent of payments IID would have received should IID decide not to engage in a lawful transfer to a ready, willing and able transferee. CVWD can bring potential transferees to IID's attention for IID's consideration. Should IID be unable to reasonably use or transfer the non-acquired Conserved Water, CVWD will not be relieved of its payment obligation to IID, but will be permitted to use the Conserved Water for any lawful purpose within its jurisdictional boundary, except that prior to Calendar Year 2018, CVWD must use such Conserved Water for irrigation use within Improvement District No. 1 or in a manner that produces the same inflow to the Salton Sea as if used for irrigation within Improvement District No. 1. The relief of payment provisions of this Section 3.6 take precedence over any provisions of Article 6 or 7.

3.7 Permanent Reduction of Acquired Water. CVWD may permanently waive its rights to acquire some of the First Fifty Thousand and Second Fifty-Three Thousand Acquisitions and its corresponding obligation to pay by providing written notice to IID at least two years prior to the January 1 of the Calendar Year in which the unreduced volume would otherwise be obtained, but in no event later than December 31, 2023, specifying the permanent reduction volume (the "**Permanent Reduction Notice**"). The permanent reduction volume below the aggregate acquisition volume of one hundred and three thousand (103,000) AFY must be in a volume comprised of one or more increments of five thousand (5,000) AFY. The permanent reduction volume will reduce the Second Fifty-Three Thousand Acquisition and thereafter the First Fifty Thousand Acquisition; and, after the Permanent Reduction Notice is

provided, the First Fifty Thousand Acquisition and the Second Fifty-Three Thousand Acquisition volumes are deemed appropriately adjusted for purposes of this Agreement.

ARTICLE 4

TERM

4.1 Term.

(1) **Agreement.** This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date.

(2) **Second Fifty-Three Thousand Acquisition.** The term for the Second Fifty-Three Thousand Acquisition shall be limited to the shorter of the term for this Agreement or the period from January 1 of Year 1 to December 31 of Year 45.

4.2 Effective Date. The obligations of the Parties under Articles 2, 3, 6, 14, 15, 16 and 17 hereof shall be contingent upon the occurrence of, and shall not become effective until, the Effective Date.

4.3 Effect of Termination. The provisions of Section 3.4(4) of the QSA are incorporated herein by reference, except that Section 14.3(2) of this Agreement shall survive Termination of this Agreement as set forth therein.

ARTICLE 5

PRICE

5.1 First Fifty Thousand Acquisition. The price per AF for the First Fifty Thousand Acquisition shall be Fifty Dollars (\$50.00) in 1999 Dollars.

5.2 Second Fifty-Three Thousand Acquisition. The price per AF for the Second Fifty-Three Thousand Acquisition shall be One Hundred Twenty-Five Dollars (\$125.00) in 1999 Dollars.

ARTICLE 6

PAYMENT

6.1 Schedule for Payments.

(1) **Payment Schedule.** Invoices for Conserved Water will be sent annually on June 1 by IID to CVWD and, with respect to any Second Fifty-Three Thousand Acquisition amounts, also to MWD. Each invoice will specify the date of mailing, date on which the payment thereunder becomes due, per AF charges, total amount due and owing, and, with respect to any Second Fifty-Three Thousand Acquisition amounts, the portion of the total amount which is subject to MWD's reimbursement obligation to CVWD under the CVWD/MWD Acquisition Agreement. CVWD will send by the following June 15 a statement of acceptance of the invoice,

or a statement detailing any disagreement in the per AF charges or the total amount due and owing. Payment of the undisputed amount and fifty percent (50%) of any disputed amount of any such invoice shall be due on the following July 1 ("**Due Date**"). Payment of the balance of any unpaid disputed amount, or refund of any of the paid disputed amount shall be due on the tenth (10th) business day following final resolution of the payment dispute. As an accommodation, MWD may pay directly to IID on CVWD's behalf any portion of an amount due and owing or disputed under an invoice, and MWD shall be a third-party beneficiary with respect to any payment dispute applicable to all or part of the amount paid by MWD; and IID may pay any refund of any of such paid disputed amount directly to MWD following final resolution of the payment dispute. Notwithstanding, CVWD is fully and solely responsible for the payment to IID of the total amount due for the First Fifty Thousand Acquisition and the Second Fifty-Three Thousand Acquisition.

(2) **Amount of Annual Payments.** The amount for each annual payment for Conserved Water during any Year is the quantity in AF of Conserved Water available to be acquired as of January 1 of that Year times the applicable price in 1999 Dollars.

6.2 Method of Payment. IID will credit any payment received by IID from MWD pursuant to the reimbursement obligation provisions of the CVWD/MWD Acquisition Agreement against CVWD's payment obligation under Section 6.1; but IID will have no responsibility for any breach or failure by MWD to perform under such provisions. Every payment to IID required under this Agreement must be made in lawful money of the United States of America, to the order of IID, and paid by wire transfer. The initial wire transfer instructions are as follows:

Imperial Irrigation District
01883-80154
Reference, if any

Bank of America
San Francisco
121000358

Payment will be considered made by CVWD upon confirmation of the funds being transferred by CVWD (and, as applicable, by MWD) and received by IID's bank on or before the Due Date, notwithstanding any clearing time or delay in IID's bank releasing funds to IID. IID may change these wire transfer instructions by giving notice to CVWD in accordance with Section 19.6 below. IID will provide a copy of any such notice to MWD in the manner set forth in Section 11.1 of the QSA.

6.3 Late Payments. Payment of the amount required shall be delinquent if not made by or on behalf of CVWD before the close of crediting activity on the Due Date. In the event that CVWD is delinquent in the payment of any amount required, CVWD shall pay an additional charge ("**Late Payment Charge**") equal to two percent (2%) of the delinquent payment for each month or portion thereof that such payment remains delinquent; provided, however, that if the total period of delinquency does not exceed five (5) Business Days, the additional charge shall be equal to one percent (1%) of the delinquent payment.

6.4 Annual Settling-Up Payment. Although the payment provisions set forth above are based on a price as of each July 1 expressed in 1999 Dollars, it is expected that as of the date that the invoice is to be prepared and sent to CVWD (and, as applicable, to MWD) only a United States published estimate of the relevant Inflation Index determinations may be available, with the final relevant index determinations by the United States not being available until a later date. In contemplation of that circumstance, IID shall send a settling-up invoice to CVWD (and, as applicable, to MWD) within sixty (60) days of the United States publication of the relevant Inflation Index final determinations, which identifies any change, as a payment or credit due, in the previously sent invoice which was based on an estimated Inflation Index. Within thirty (30) days of transmission of the settling-up invoice, CVWD will send a statement of acceptance of the settling-up invoice, or a statement detailing any disagreement. The payment by or credit to CVWD (and, as applicable, to MWD) will be due by adding the payment or subtracting the credit, in either case without interest, to the next June 1 invoice sent by IID, with payment due on the following July 1, all as more fully described in Attachment 5. Should there be a disagreement in the payment or credit amount of the settling-up invoice, the payment provisions pending resolution of the dispute will be the same as disputes over the June 1 invoices.

6.5 Payments for Environmental Costs. The method and process for CVWD's payment or reimbursement of certain Environmental Review Process Costs and Environmental Mitigation Costs, as contemplated by Section 10.3 of this Agreement, shall be as set forth in the ECSA.

ARTICLE 7

ACQUISITION MECHANISM

7.1 Commencement of Acquisition of Conserved Water. The acquisition of Conserved Water shall be deemed to commence on the Effective Date.

7.2 Acquisition Mechanism and Location. IID performs its obligations to make Conserved Water available for CVWD acquisition under this Agreement by reducing its Consumptive Use of the Colorado River at Imperial Dam by an amount equal to the Conserved Water to be acquired. When IID acts in that manner, IID has satisfied its obligation to make Conserved Water available for acquisition. CVWD accepts responsibility for the acquired Conserved Water at Imperial Dam. CVWD has no duty to divert any or all of the Conserved Water. The payments by CVWD to IID under this Agreement are to enable CVWD to acquire the Conserved Water and are due whether or not CVWD actually diverts that Conserved Water. CVWD bears the sole risk and responsibility of transporting the Conserved Water to the CVWD service area and any and all Conveyance Losses shall be borne by CVWD.

7.3 CVWD's Scheduling Discretion. CVWD acquires Conserved Water between January 1 and December 31 of each Year. CVWD has the complete discretion within a Year on all matters relating to the scheduling of its diversions from Imperial Dam to the CVWD service area.

ARTICLE 8

PRIORITY 3, 6 AND 7

8.1 Limitation on Diversions. IID and CVWD have agreed to limit and share diversions under Priorities 3, 6 and 7 as explicitly set forth in the QSA.

ARTICLE 9

CONDITIONS TO CVWD'S AND IID'S OBLIGATIONS

9.1 Satisfaction of Conditions. CVWD's rights to acquire and pay for Conserved Water, and IID's obligations to undertake Water Conservation Efforts and Make Available Conserved Water for acquisition by CVWD, are all subject to the satisfaction of the following conditions on or before the dates specified below. CVWD and IID each agree to proceed with reasonable diligence and to use reasonable best efforts to satisfy those conditions for which it has responsibility. To the extent that the SWRCB imposes costs on the Parties for its review and approval of CVWD's acquisition of Conserved Water from IID under this Agreement, IID and CVWD agree to share such costs equally, except that any SWRCB-imposed costs relating to the SWRCB's role in reviewing IID's reasonable and beneficial use of water shall be borne solely by IID. To the extent that the Secretary imposes costs on the Parties for its review and agreement to CVWD's acquisition of Conserved Water from IID under this Agreement, IID and CVWD agree to share such costs equally, except that any Secretary-imposed costs relating to any Secretary role in reviewing IID's reasonable and beneficial uses of water shall be borne solely by IID. Other than with respect to CVWD's obligations for Environmental Review Process Costs and Environmental Mitigation Costs and CVWD's obligations for payment of SWRCB or Secretary expenses spelled out in the preceding two sentences, the amount that CVWD should spend in an effort to satisfy these conditions is committed wholly to CVWD's complete discretion.

(1) **QSA.** Each of the conditions precedent set forth in the QSA shall have been satisfied or waived as of the QSA Closing Date.

(2) [Intentionally omitted].

(3) **Flooding Case Settlement Agreement.** IID and CVWD shall have executed a settlement agreement regarding the sharing of liability in Salton Sea flooding cases.

9.2 Written Waiver of Conditions. The Parties may agree to waive in writing any one or more of the foregoing conditions, in whole or in part; provided, however, that neither Party shall waive review in accordance with CEQA or NEPA or other requirements under applicable laws.

9.3 Extension by Agreement. The Parties may agree to extend the date by which any condition must be satisfied or waived.

9.4 Consequence of Failure of Conditions. If the conditions in this Article are not timely satisfied or waived, then this Agreement will be void *ab initio*, and all rights granted by this Agreement will be terminated and forfeited.

ARTICLE 10

COMPLIANCE WITH ENVIRONMENTAL LAWS

10.1 Compliance With CEQA and NEPA. In executing this Agreement, the Parties recognize and acknowledge that the environmental review and assessment required by CEQA and NEPA have been completed.

10.2 Compliance With Endangered Species Act and Other Applicable Laws. In executing this Agreement, the Parties recognize and acknowledge that they have taken all steps necessary to assess whether the activities described in this Agreement may adversely impact threatened or endangered species, critical habitat or other environmental resources regulated pursuant to the federal Endangered Species Act, the California Endangered Species Act and other applicable state and federal laws relating to the protection of environmental resources (collectively, "**Resource Laws**"). To the extent required to implement the activities described in this Agreement in compliance with all Resource Laws, and as a condition to implementing such activities, the Parties have undertaken consultation with the U.S. Fish & Wildlife Service ("**USFWS**") for their respective areas of responsibility and have obtained all necessary permits, approvals and authorizations from USFWS, the California Department of Fish & Game and other resource agencies.

10.3 Payment of Environmental Review Process and Environmental Mitigation Costs. The terms and conditions governing the Parties' respective responsibilities for the payment of Environmental Review Process and Environmental Mitigation Costs associated with the activities and transactions contemplated by this Agreement are set forth in the ECSA.

ARTICLE 11

ALLOCATION OF PRIORITY 3 SHORTFALL

11.1 Terms of Allocation. If, for any reason, there is less than three million eight hundred fifty thousand (3,850,000) AF available in any given year to Priorities 1, 2 and 3, CVWD's obligation to acquire and pay for Conserved Water and IID's obligation to make Conserved Water available for acquisition shall continue. Notwithstanding the above, if less than three million four hundred thirty thousand (3,430,000) AFY in the aggregate is available under Priority 3 to IID and CVWD, then any Shortfall ("**Shortfall**"), defined as the difference between three million four hundred thirty thousand (3,430,000) AFY and the aggregate AFY available to IID and CVWD under Priority 3, shall be allocated and shared as set forth in subsections (1) – (5) below; however, under no circumstances shall the Consumptive Use available to IID remaining under Priority 3 be reduced to a volume less than the volume of IID's present-perfected right.

(1) **Reduction of Priority 3 and Acquired Water.** Subject to IID's retention of its Priority 3 Consumptive Use volume equal to its present-perfected right, shortfalls will be allocated first to either Party's Priority 3 right and thereafter, if necessary, to reduce acquired water under this Agreement.

(2) **Allocation of Shortfall by Consent.** IID and CVWD shall meet as soon as reasonably practicable, but not later than ten (10) days after each is informed that a Shortfall will or reasonably might occur in order to negotiate a consensual sharing of the Shortfall. If no such consensual resolution is obtained within fifteen (15) days of such meeting, then either Party may commence litigation to resolve the allocation of the Shortfall.

(3) **Allocation of Shortfall by Litigation.** Either IID or CVWD may commence a lawsuit before any appropriate court to resolve the allocation of the Shortfall. Litigation shall not occur in any forum other than a court. The matter shall be tried to a judge, not a jury. In such litigation, both IID and CVWD may assert any right, claim, power or defense related to water rights including priority, purpose or method of use; provided, however, that (i) no judgment shall reduce the Consumptive Use right of IID under Priority 3 to less than the volume associated with IID's present perfected right; (ii) any judgment will be limited only to the allocation of the Shortfall; and (iii) this Agreement, the Implementation Agreement, the Quantification Settlement Agreement, the IID/MWD Acquisition Agreement, the CVWD/MWD Acquisition Agreement, the 1998 IID/SDCWA Transfer Agreement, and the SWRCB and BOR Approvals of any of these agreements shall be inadmissible as evidence and shall not be considered by the court in ruling on the allocation of the Shortfall. In any litigation to resolve the allocation of the Shortfall, should CVWD assert any right, claim, power or defense involving any evaluation or assessment of IID's use of water, it shall be conclusively presumed that any water conserved by IID for transfer or acquisition or used by IID for environmental mitigation purposes through Temporary Land Fallowing or crop rotation during the Term of this Agreement has instead been conserved by efficiency improvements, such as by reducing canal seepage and spills or by reducing surface or subsurface runoff from irrigated fields.

(4) **Provisional Allocation of Shortfall During the Litigation.** During the pendency of any litigation and until a final, nonappealable judgment is entered, IID and CVWD agree to allocate any Shortfall on the basis of seventy-five percent (75%) to IID and twenty-five percent (25%) to CVWD.

(5) **Settling Up After Litigation Concluded.** Upon the entry of a final, nonappealable judgment, the Parties will settle up and allocate the Shortfall in accordance with the final judgment. The Party who obtained more water under the Provisional Allocation than it would have received under the final judgment is the Debtor Party; the Party who obtained less water under the Provisional Allocation than it would have received under the final judgment is the Creditor Party. The Debtor Party shall repay the Creditor Party the amount it received under the Provisional Allocation in excess of that which it would have received had the final judgment been in effect throughout the Shortfall period. The Debtor Party shall repay in equal annual installments and shall have a repayment period equal to three (3) years for every one (1) year that the litigation was pending. To the extent that Flood Control Releases occur during the repayment period and can be reasonably used or stored by the Creditor Party, the obligation of the Debtor Party is commensurately reduced.

ARTICLE 12

FORCE MAJEURE

12.1 Force Majeure. The risk of a Force Majeure event, such as a natural disaster, act of war or like emergency disrupting IID's Water Conservation Efforts or disrupting CVWD's ability to acquire, divert or receive Conserved Water, shall be borne by the Parties in accordance with the following terms; provided, however, that in no circumstance shall a Priority 3 Shortfall, as described in Article 11 above, an extended drought (even of unexpected magnitude), or a new and unexpected environmental mitigation obligation be deemed a Force Majeure event within the meaning of this Article 12. Unexpected environmental mitigation obligations that result in increased costs shall be dealt with pursuant to the ECSA and the QSA-JPA. However, should an environmental problem arise which results in a Transfer Stoppage as defined in the QSA, then notwithstanding the above language, the Transfer Stoppage shall be treated as a Force Majeure event.

(1) IID shall be required, at its own expense, to take whatever steps are reasonable to cure or resolve any effects of a Force Majeure event on its ability to undertake or continue its Water Conservation Efforts or otherwise to Make Available Conserved Water, and shall be relieved of any obligation to conserve or Make Available Conserved Water for acquisition by CVWD until the cure or resolution is accomplished. CVWD may withhold payments otherwise due until IID has cured or resolved such effects and Conserved Water again becomes available for acquisition by CVWD.

(2) CVWD shall be required, at its own expense, to take whatever steps are reasonable to cure or resolve a Force Majeure event on its ability to acquire, divert, receive, transport, or direct recharge Conserved Water and, until such cure or resolution is accomplished, shall be relieved of its payment obligations to IID. IID may itself use, or make available for lawful acquisition by others, the Conserved Water for which CVWD would otherwise have paid, and CVWD shall have no right to acquire the Conserved Water until it has cured or resolved such effects and again becomes obligated to make payments to IID.

ARTICLE 13

EMINENT DOMAIN/TAKINGS

13.1 Effect on Agreement. If at any time during the term of this Agreement, any of the Conserved Water to be made available to CVWD by IID pursuant to this Agreement is taken for any part of the remaining term of this Agreement by lawful exercise of the power of eminent domain by any sovereign, municipality, public or private authority or other person ("taking"), the terms of this Agreement shall not be affected in any way, except that for the period of the taking as to the Conserved Water taken only, IID shall be relieved of its obligation to make such Conserved Water available to CVWD and CVWD shall be relieved of its obligation to pay IID for such Conserved Water. Each Party hereby waives any right it may have under the provisions of Code of Civil Procedure § 1265.130 to petition the Superior Court to terminate this Agreement.

13.2 Compensation for Taking. The compensation paid for any taking of Conserved Water otherwise to be Made Available to CVWD pursuant to this Agreement (the “subject Conserved Water”) shall be separately assessed under Code of Civil Procedure § 1260.220(a) according to each Party's interest as follows:

(1) CVWD shall be entitled to:

(i) Any compensation paid for the amount attributable to the market value of the subject Conserved Water for the period from the date of the taking to the earlier of the date of the end of the taking or the term of this Agreement in excess of (x) the present value at the date of the taking of the amounts that CVWD would otherwise be obligated to pay to IID for the subject Conserved Water under this Agreement and (y) the market value, if any, attributed to MWD's unexercised Right of First Refusal and Secondary Option under the IID/MWD Acquisition Agreement with respect to the subject Conserved Water to the extent compensation is allowable therefor under applicable law.

(ii) Any compensation paid for severance damage to CVWD attributable to the taking of the subject Conserved Water; and

(iii) Any compensation paid for loss of goodwill to CVWD attributable to the taking of the subject Conserved Water.

(2) IID shall be entitled to all other compensation paid, including but not limited to:

(i) Any compensation paid for the present value at the date of the taking of the amounts that CVWD would otherwise be obligated to pay to IID for the subject Conserved Water under this Agreement;

(ii) Any compensation paid for severance damage to IID attributable to the taking of the subject Conserved Water; and

(iii) Any compensation paid for the loss of goodwill to IID attributable to the taking of the subject Conserved Water.

(3) Nothing in this Article 13 shall affect the right of either Party to relocation assistance benefits.

(4) Nothing in this Article 13 shall affect the rights or claims of either Party with respect to a taking of some or all of its water rights, including Colorado River water rights.

ARTICLE 14

MISCELLANEOUS

14.1 Retention of Water Rights; No "Property" Rights in Water Rights Created Hereunder. This Agreement does not in any way transfer, assign, encumber, or grant to CVWD any ownership interest in or control over any water rights held by IID, and does not in any way

transfer, assign, encumber, or grant to IID any ownership interest or control over any water rights held by CVWD. IID and CVWD covenant and agree not to assert against each other any such interest in or control over any water rights of the other Party.

14.2 Contracts with Landowners. Should IID contract with any Landowners to undertake Water Conservation Efforts, IID shall solely contract with the Contracting Landowners and shall be solely responsible for enforcing the terms of such contracts. IID shall bear the sole responsibility and consequences of a breach by any Contracting Landowner. CVWD shall not be a third-party beneficiary to any of the contracts between the Contracting Landowners and IID, and CVWD shall not have or acquire any rights by virtue of those contracts.

14.3 Water Use. (1) During the Term of this Agreement, and except as to the Allocation of Shortfall provisions of Article 11 above, neither IID or CVWD will challenge the water use practices or reasonableness of water use of the other, or in any way seek to reduce each other's rights to Consumptive Use of Colorado River water or each other's acquisition of Conserved Water as set forth in the QSA; and (2) during the Term of this Agreement and for six (6) years thereafter, CVWD covenants that in dealing directly with IID, CVWD shall conclusively presume that any water conserved for transfer or acquisition or used by IID for environmental mitigation purposes through Temporary Land Fallowing or crop rotation was conserved by IID in the same volume as if conserved by efficiency improvements such as by reducing canal seepage and spills or by reducing surface or subsurface runoff from irrigated fields. Also, during the Term of this Agreement and for six (6) years thereafter, CVWD covenants that in any administrative, judicial or legislative proceeding involving evaluation or assessment of IID's use of water, CVWD will not oppose (but shall not be required to support) IID's position that any water conserved for transfer or acquisition or used by IID for environmental mitigation purposes through Temporary Land Fallowing or crop rotation must be conclusively presumed to have been conserved by IID in the same volume as if conserved by efficiency improvements, such as by reducing canal seepage and spills or by reducing surface or subsurface runoff from irrigated fields. CVWD further covenants that it will not oppose (but shall not be required to support) any effort by IID to cause any administrative, legislative or judicial body evaluating or assessing IID's use of water during the Term of this Agreement and for six (6) years thereafter to make the same conclusive presumption. In addition, CVWD covenants that, during the term of the QSA and for six (6) years thereafter, CVWD will not support (but shall not be required to oppose) in any forum, including any activity before any legislative, administrative or judicial body, any proposal to require the creation of Conserved Water for acquisition or transfer by IID after December 31, 2017 through the use of Temporary Land Fallowing, permanent land fallowing or crop rotation. CVWD also agrees that it will not oppose (but shall not be required to support) IID's position that it has the right to Consumptive Use of Colorado River Water or IID created Conserved Water to mitigate environmental impacts resulting from the acquisition or transfer of Conserved Water contemplated by the QSA as set forth in the ECSA and the Exhibits thereto. CVWD does not oppose (but shall not be required to support) the right of IID to create all Conserved Water by efficiency improvements without providing any mitigation water after Calendar Year 2017, as reflected on the Compromise IID/SDCWA and QSA Delivery Schedule attached as Exhibit B.

14.4 Other Transfers of Water by IID. During the Term of this Agreement, with the exception of any transfer initiated or to be initiated during a period in which a Shortfall needs to be allocated pursuant to Article 11 above, CVWD hereby consents and will not object to any transfer or use of water by IID outside the Imperial Service Area provided such transfer or use does not result in reduction in water available to CVWD as set forth in the QSA. IID acknowledges that CVWD's consent during the Term of this Agreement does not waive CVWD's position following expiration of the Term of this Agreement that the Compromise Agreement signed by the Parties on February 14, 1934, limits IID's rights to divert Colorado River water pursuant to its Section 5 contract to water that IID can put to beneficial use exclusively in its service area. CVWD acknowledges that CVWD's consent during the Term of this Agreement does not waive IID's position that CVWD's consent is not required to conserve and transfer Colorado River water for consumptive use outside IID's service area.

14.5 Other Transfers of Water by CVWD. During the Term of this Agreement, except as provided in Section 3.6 above, CVWD covenants to not transfer or assign to any person for use outside CVWD Improvement District No. 1, other than for recharge of CVWD Improvement District No. 1: (i) any of its right to Consumptive Use of Colorado River water; or (ii) the right to use any conserved water created by CVWD.

14.6 CVWD Groundwater Storage of IID Water. CVWD grants to IID the right to store IID water in the groundwater basin in the Coachella Valley and to utilize CVWD's groundwater recharge and extraction facilities upon the payment to CVWD of actual costs, all as more specifically set forth in a Groundwater Storage Agreement in the form substantially similar to that attached as Exhibit C.

14.7 Re-Transfer. CVWD has no right to re-transfer Conserved Water acquired from IID. If CVWD exchanges Conserved Water acquired from IID for MWD-delivered water, and if the exchange obligation of each party must be and actually is fulfilled within a single Year, then that exchange is not a re-transfer and is not subject to the prohibition set forth above. Should CVWD reduce its use of Colorado River water in any Year so that MWD can acquire a corresponding amount in that same year pursuant to the terms of the CVWD/MWD Acquisition Agreement, the MWD/CVWD Transfer and Exchange Agreement, the Agreement Between MWD and CVWD for Exchange of Water dated July 7, 1983, or the Advance Delivery Agreement dated June 28, 1984, and should CVWD have previously acquired from MWD a volume of water greater than or equal to the amount that MWD is to acquire and for which CVWD is obligated to make available (including conjunctive use programs), then CVWD's reduction and MWD's acquisition shall not be considered a re-transfer of Conserved Water acquired from IID in that year. Other than as provided in Section 3.6 herein, CVWD shall not use Conserved Water outside of Improvement District No. 1 for purposes other than recharge of Improvement District No. 1, CVWD's non-diversion of Conserved Water in order to make a cure payment under the Inadvertent Overrun and Payback Policy, or in order to make a settling up payment to IID of a Shortfall under Article 11 above will not be considered a re-transfer. CVWD will provide IID with information regarding any exchanges with MWD or other allowed uses such that IID is able to timely determine CVWD's compliance with this provision.

14.8 Calendar-Year Limitation. CVWD's right to acquire Conserved Water under this Agreement is not cumulative, and CVWD has no right to any such Conserved Water that it

does not divert within the Year. Thus, if CVWD fails to divert all of the Conserved Water to which it is entitled under this Agreement in any one Year, the amount which CVWD is entitled to acquire (and the amount that IID is obligated to Make Available under this Agreement) in any other Year is unaffected.

14.9 Salton Sea Mitigation Water. CVWD shall, at no expense or cost to CVWD, cooperate with IID and SDCWA's efforts to provide salinity management water to the Salton Sea as provided in this section. IID shall make available Conserved Water to SDCWA. If necessary, SDCWA shall exchange a portion of such water with CVWD for water from other non-Colorado River sources to be delivered to the Salton Sea or cause such water to be delivered to the Salton Sea through forbearance arrangements with IID.

14.10 Settlement and Efficiency Conservation Opportunity Payment. In consideration of (i) the settlements reached with CVWD and MWD through the QSA, and (ii) the opportunity to increase the conservation ramp-up schedule and utilize conservation methods of IID's choice, including efficiency conservation, as set forth in the IID/DWR Agreement, IID shall pay to the QSA-JPA twenty-four million dollars (\$24,000,000) in Effective-Date Dollars, on the schedule attached as an exhibit to the QSA-JPA.

ARTICLE 15

DEFAULT AND DISPUTES

15.1 Events of Default by CVWD. Each of the following constitutes an "Event of Default" by CVWD under this Agreement:

(1) **Payment.** CVWD fails to pay the required amount by the Due Date. If CVWD fails to pay the required amount by the Due Date, the delinquent payment will also bear a Late Payment Charge as set forth in Section 6.3 until paid in full.

(2) **Other Promises.** CVWD fails to perform or observe any term, covenant, or undertaking in this Agreement that it is to perform or observe, and such default continues for forty-five (45) days from a Notice of Default being sent in the manner provided in Section 19.6.

(3) **Warranties and Representations.** Any warranty, representation, or other statement made by or on behalf of CVWD and contained (i) in this Agreement or (ii) in any other document furnished in compliance with or in reference to this Agreement is on the date made, or later proves to be, false, misleading, or untrue in any material respect.

15.2 Events of Default by IID. Each of the following constitutes an "Event of Default" by IID under this Agreement:

(1) **Transfer.** IID fails to Make Conserved Water Available for acquisition by CVWD in the quantities and on the schedule specified in this Agreement.

(2) **Other Promises.** IID fails to perform or observe any term, covenant, or undertaking in this Agreement that it is to perform or observe, and such default continues for forty-five (45) days from a Notice of Default being sent in the manner provided in Section 19.6.

(3) **Warranties and Representations.** Any warranty, representation, or other statement made by or on behalf of IID and contained (i) in this Agreement or (ii) in any other document furnished in compliance with or in reference to this Agreement is on the date made, or later proves to be, false, misleading, or untrue in any material respect.

15.3 Certain Disputes Between IID and CVWD. Any disagreements between IID and CVWD concerning the amount of an invoice or settling-up invoice, the calculation or application of the Inflation Index, or the calculation of capacity and actual costs for CVWD groundwater storage of IID water, shall not be considered Events of Default, but instead considered Arbitration Disputes which are resolved pursuant to Sections 17.1 and 17.2.

15.4 Determination of Reasonableness of Steps Taken to Cure or Resolve Effects of a Force Majeure Event. Any disagreements between IID and CVWD concerning the reasonableness of steps taken by CVWD or IID to cure or resolve the effects of a Force Majeure event shall be resolved pursuant to Sections 17.1 and 17.3.

ARTICLE 16

REMEDIES

16.1 Specific Performance for Defaults. Each Party recognizes and agrees that the rights and obligations set forth in this Agreement for defaults are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party defaults by not performing in accordance with the specific wording of any of the provisions in this Agreement applicable to that Party, or otherwise breaches, other than those issues that are Disputes as set forth in Section 15.3, the other Party would likely suffer irreparable harm. Therefore, if either Party breaches this Agreement, an action at law for damages or other remedies at law would be wholly inadequate to protect the unique rights and interests of the other Party to the Agreement. Accordingly, in any court controversy concerning this Agreement, the Agreement's provisions will be enforceable in a court of equity by a decree of specific performance. This specific-performance remedy is not exclusive and is in addition to any other remedy available to the Parties.

16.2 Cumulative Rights and Remedies. The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delays in exercising any such right or remedy, the non-breaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power, or privilege precludes any other or further exercise of a right, power, or privilege granted by this Agreement or otherwise.

16.3 Actions or Proceedings Between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to

- (1) Being transferred to a Neutral County, or
- (2) Instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.
- (3) Each Party hereby:
 - (i) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;
 - (ii) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;
 - (iii) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and
 - (iv) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

Nothing in this Section 16.3, shall impair or limit the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

ARTICLE 17

RESOLUTION OF DISPUTES

Arbitration Disputes between the Parties described in Section 15.3, shall be resolved pursuant to the provisions of Sections 17.1 and 17.2 of this Article. All other disputes involving Events of Default shall be resolved pursuant to the provisions of Section 17.1 and 17.3 of this Article.

17.1 Meeting of General Managers. Within thirty (30) days of the Parties identifying the existence of a dispute, the General Managers of IID and CVWD shall meet and attempt to resolve the dispute to their mutual satisfaction. Any such resolution shall be in writing and be binding on the Parties.

17.2 Arbitration. Any dispute listed in Section 15.3 arising out of this Agreement which cannot be resolved by agreement shall be resolved through binding arbitration conducted in a Neutral County or such other location as the Parties may agree. Arbitration proceedings may be initiated by either Party sending a demand for arbitration to the other Party in conformance with the Notice provisions of this Agreement. The Parties shall impanel a group of three arbitrators by each selecting an arbitrator of their choice who shall then select the third member of the panel. If the two arbitrators appointed by the Parties cannot agree on the selection of a third arbitrator within ten (10) Business Days from the initiation of the arbitration proceeding, the third neutral arbitrator shall be selected by the presiding judge of the Neutral County Superior Court. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. Prior

to the commencement of proceedings, the appointed arbitrators will take an oath of impartiality. The Parties shall use their reasonable best efforts to have the arbitration proceeding concluded within ninety (90) Business Days of the selection of the third panel member.

In rendering the award, the arbitrators shall determine the rights and obligations of the Parties according to the substantive and procedural laws of California. All discovery shall be governed by the CCP with all applicable time periods for notice and scheduling provided therein being reduced by one-half (½). The arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding compliance with discovery requests shall be decided by the arbitrators. A decision by two of three arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party whom the decision is against. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the other Party's costs.

17.3 Trial of Certain Disputes. Any dispute to be resolved pursuant to the provisions of this Section 17.3 shall be determined following trial by a Judge Pro Tempore from a Neutral County appointed by the Presiding Judge of the County in which a complaint is filed pursuant to the venue rules in the California Code of Civil Procedure. The proceeding shall be initiated when one Party sends a copy of the complaint intended to be filed with the Superior Court in the appropriate County. The General Managers and attorneys for the Parties shall meet within ten (10) Business Days of mailing, faxing or e-mail transmission of the proposed complaint to determine whether agreement can be reached on a particular retired Superior Court Judge to preside over the trial. The complaining Party shall thereafter file the complaint in the appropriate County. The Parties agree that at the appropriate time they will stipulate to the appointment by the Presiding Judge of the Superior Court for that County of the retired judge agreed upon as the Judge Pro Tempore to preside over the case for all purposes. If the Parties cannot agree upon a retired judge, the venue, filing and the normal trial procedures for Superior Court cases shall apply; provided, however, that any judge assigned to the case shall be from a Neutral County. The Parties agree that the issues in the case shall be tried and determined by the Court as nonjury issues.

ARTICLE 18

REPRESENTATIONS AND WARRANTIES

18.1 IID's Representations and Warranties.

(1) **Due Authority and Approval.** Subject only to any approvals and conditions required under Article 9 of this Agreement and compliance with environmental laws pursuant to Article 10 of this Agreement: (i) IID has all legal power and authority to enter into this Agreement, to implement its Water Conservation Efforts, and to make the Conserved Water available for CVWD acquisition on the terms set forth in this Agreement, and (ii) the execution and delivery of this Agreement and IID's performance of its obligations under the Agreement have been duly authorized by all necessary actions of IID, and no other act or proceeding by IID is necessary to authorize such execution, delivery, or performance.

(2) **Signatories.** The persons executing this Agreement on behalf of IID have full power and authority to bind IID to the terms of this Agreement. In addition, the persons signing this Agreement on IID's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on the IID's behalf personally warrant and represent that they have reviewed this Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability.** Subject only to any approvals required under Article 9 of this Agreement and compliance with environmental laws pursuant to Article 10 of this Agreement, this Agreement constitutes the valid and binding agreement of IID, enforceable against IID in accordance with the terms of the Agreement.

(4) **No Conflicts.** The execution and implementation of this Agreement do not violate or trigger default under any law or other agreement to which IID is subject.

(5) **No Pending or Threatened Disputes.** Except as disclosed on Exhibit D attached hereto, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to IID's knowledge, threatened against or affecting IID relating to the performance contemplated by this Agreement, including the adequacy of the Water Conservation Efforts undertaken by IID, IID's Making Conserved Water Available for acquisition by CVWD, and CVWD's payment for such Conserved Water.

(6) **Notice of Developments.** IID agrees to give prompt notice to CVWD if IID discovers that any of its own representations and warranties were untrue when made or determines that any of its own representations and warranties will be untrue as of the Effective Date.

18.2 CVWD's Representations and Warranties.

(1) **Due Authority/Approval.** Subject only to the approvals and conditions required under Article 9 of this Agreement and compliance with environmental laws pursuant to Article 10 of this Agreement: (i) CVWD has all legal power and authority to enter into this Agreement and to acquire the Conserved Water on the terms set forth in this Agreement, and

(ii) the execution and delivery of this Agreement and CVWD's performance of its obligations under the Agreement have been duly authorized by all necessary actions of CVWD, and no other act or proceeding by CVWD is necessary to authorize such execution, delivery, or performance.

(2) **Signatories**. The persons executing this Agreement on behalf of CVWD have full power and authority to bind CVWD to the terms of this Agreement. In addition, the persons signing this Agreement on CVWD's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on CVWD's behalf personally warrant and represent that they have reviewed the Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability**. Subject only to any approvals and conditions required under Article 9 of this Agreement and compliance with environmental laws pursuant to Article 10 of this Agreement, this Agreement constitutes the valid and binding agreement of CVWD, enforceable against CVWD in accordance with the terms of the Agreement.

(4) **No Conflicts**. The execution and implementation of the Agreement do not violate or trigger default under any law or other agreement to which CVWD is subject.

(5) **No Pending or Threatened Disputes**. Except as disclosed on Exhibit E attached hereto, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to CVWD's knowledge, threatened against or affecting CVWD relating to the performance contemplated by this Agreement, including the adequacy of the Water Conservation Efforts undertaken by IID, IID's Making Conserved Water Available for acquisition by CVWD, and CVWD's use of the acquired Conserved Water and its payment for such Conserved Water.

(6) **Notice of Developments**. CVWD agrees to give prompt notice to IID if CVWD discovers that any of its own representations and warranties were untrue when made or determines that any of its own representations and warranties will be untrue as of the Effective Date.

ARTICLE 19

GENERAL PROVISIONS

19.1 No Third-Party Rights. This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

19.2 Counting Days. Days shall be counted by excluding the first day and including the last day, unless the last day is not a Business Day, and then it shall be excluded. Any act required by this Agreement to be performed by a certain day shall be timely performed if it is completed before 5:00 p.m. Pacific Time on that date, unless otherwise specified. If the day for performing any obligation under this Agreement is not a Business Day, then the time for performing that obligation shall be extended to 5:00 p.m. Pacific Time on the next Business Day.

19.3 Ambiguities. Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

19.4 Governing Law. California law governs this Agreement and any dispute arising from the contractual relationship between the Parties under the Agreement.

19.5 Binding Effect; No Assignment. This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. Neither Party may assign any of its rights or delegate any of its duties under this Agreement. Any Assignment or Delegation made in violation of this Agreement is void and of no force or effect.

19.6 Notices. All notices, requests, demands, or other communications under this Agreement must be in writing, and sent to both addressees of each Party. Notice will be sufficiently given for all purposes as follows:

- *Personal Delivery.* When personally delivered to the recipient. Notice is effective on delivery.
- *First-Class Mail.* When mailed first-class to the last address of the recipient known to the Party giving notice. Notice is effective five mail delivery days after it is deposited in a United States Postal Service office or mailbox.
- *Certified Mail.* When mailed certified mail, return receipt requested. Notice is effective on receipt, if a return receipt confirms delivery.
- *Overnight Delivery.* When delivered by an overnight delivery service such as Federal Express, charged prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.

Addresses for purpose of giving notice are as follows:

To IID:	Imperial Irrigation District 333 E. Barioni Boulevard P.O. Box 937 Imperial, California 92251 Attn: General Manager Telephone: (760) 339-9477
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With a copy to:	Horton, Knox, Carter & Foote 895 Broadway El Centro, California 92243 Attn: John P. Carter, Chief Counsel Telephone: (760) 352-2821
To CVWD:	Coachella Valley Water District P.O. Box 1058 Coachella, California 93326 Attn: General Manager and Chief Engineer Telephone: (760) 398-2651
With a copy to:	Redwine & Sherrill 1950 Market Street Riverside, California 92501 Attn: Gerald Shoaf Telephone: (909) 684-2520

A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service. A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

19.7 Entire Agreement. This Agreement (including the exhibits and other agreements attached to or referenced in this Agreement) constitutes the final, complete, and exclusive statement of the terms of the agreement between the Parties pertaining to the acquisition of Conserved Water by CVWD from IID, and supersedes all prior and contemporaneous understandings or agreements of the Parties. Neither Party has been induced to enter into this Agreement by, nor is either Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

19.8 Time of the Essence. Time is of the essence of and under this Agreement and of every provision thereof.

19.9 Modification. This Agreement may be supplemented, amended, or modified only by the agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by both Parties.

19.10 Waiver. No waiver of a breach, failure of condition, or any right or remedy contained in or granted by the provisions of this Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right, or remedy. No waiver of a breach, failure of condition, or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

19.11 Joint Defense. The Parties agree to proceed with reasonable diligence and use reasonable best efforts to jointly defend any lawsuit or administrative proceeding challenging the legality, validity, or enforceability of any term of this Agreement, or any Party's right to act in accordance with any of the terms of this Agreement.

IN WITNESS WHEREOF, IID and CVWD have executed this Agreement as of the day and year first written above.

"IID"

IMPERIAL IRRIGATION DISTRICT, a
California irrigation district

By: [Signature]
Its: PRESIDENT

By: Gloria A. Rivera
Its: Secretary

Approved as to form:

By: [Signature]
Its: Chief Counsel

"CVWD"

COACHELLA VALLEY WATER
DISTRICT, a California county water district

By: [Signature]
Its: General Manager-Chief Engineer

Approved as to form:

By: [Signature]
Its: GENERAL COUNSEL

EXHIBIT A

EXHIBIT A

First Fifty Thousand

Agreement Year	Calendar Year	Volume (KAF)	Total First and Second Fifty-Three Thousand Volume (KAF)
1	2003	0	0
2	2004	0	0
3	2005	0	0
4	2006	0	0
5	2007	0	0
6	2008	4	4
7	2009	8	8
8	2010	12	12
9	2011	16	16
10	2012	21	21
11	2013	26	26
12	2014	31	31
13	2015	36	36
14	2016	41	41
15	2017	45	45
16	2018	50	See below
Second Fifty-Three Thousand			
16	2018	13	63
17	2019	18	68
18	2020	23	73
19	2021	28	78
20	2022	33	83
21	2023	38	88
22	2024	43	93
23	2025	48	98
24	2026	53	103
25	2027	53	103
26	2028	53	103
Through	Through
45	2047	53	103

EXHIBIT B

**EXHIBIT B
COMPROMISE IID/SDCWA AND QSA DELIVERY SCHEDULE**

Agmt Yr	Cal Yr	IID/SD (KAF)	IID/CVWD (KAF) ¹	IID/MWD (KAF)	Total Delivery (KAF)	Total Efficiency (KAF)	Fallowing for Delivery (KAF)	Mitigation Fallowing (KAF)	Total Fallowing (KAF)
1	2003	10	0	0	10	0	10	5	15
2	2004	20	0	0	20	0	20	10	30
3	2005	30	0	0	30	0	30	15	45
4	2006	40	0	0	40	0	40	20	60
5	2007	50	0	0	50	0	50	25	75
6	2008	50	4	0	54	4	50	25	75
7	2009	60	8	0	68	8	60	30	90
8	2010	70	12	0	82	12	70	35	105
9	2011	80	16	0	96	16	80	40	120
10	2012	90	21	0	111	21	90	45	135
11	2013	100	26	0	126	46	80	70	150
12	2014	100	31	0	131	71	60	90	150
13	2015	100	36	0	136	96	40	110	150
14	2016	100	41	0	141	121	20	130	150
15	2017	100	45	0	145	145	0	150	150
16	2018	130	63	0	193	193	0	0	0
17	2019	160	68	0	228	228	0	0	0
18	2020	192.5	73	2.5	268	268	0	0	0
19	2021	205	78	5.0	288	288	0	0	0
20	2022	202.5	83	2.5	288	288	0	0	0
21	2023	200	88	0	288	288	0	0	0
22	2024	200	93	0	293	293	0	0	0
23	2025	200	98	0	298	298	0	0	0
24	2026	200	103	0	303	303	0	0	0
25	2027	200	103	0	303	303	0	0	0
26	2028	200	103	0	303	303	0	0	0
27-45	2029-2047	200	103	0	303	303	0	0	0
46-75	2048-2077	200	50	0	250	250	0	0	0

¹ or MWD if CVWD declines to acquire.

EXHIBIT C

EXHIBIT C

AGREEMENT FOR STORAGE OF
GROUNDWATER

By and Between

COACHELLA VALLEY WATER DISTRICT,
a California County Water District
("CVWD")

and

IMPERIAL IRRIGATION DISTRICT,
a California County Water District
("IID")

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AGREEMENT FOR STORAGE OF GROUNDWATER

THIS AGREEMENT FOR STORAGE OF GROUNDWATER ("Agreement") is made and entered into this 10TH day of October, 2003 by and between COACHELLA VALLEY WATER DISTRICT, a California County Water District ("CVWD") and Imperial Irrigation District, a California Irrigation District ("IID"). IID and CVWD are sometimes referred to individually as a "Party" and collectively as "Parties."

RECITALS

- A. CVWD is a county water district, organized under the *California County Water District Law*, codified at *Section 30000 et seq.* of the *California Water Code* and delivers water in Riverside County, California for potable and irrigation purposes.
- B. IID is an irrigation district, organized under the *California Irrigation District Law*, codified at *Section 20500, et seq.* of the *California Water Code* and delivers water in Imperial County, California for potable and irrigation purposes.
- C. IID is a contractor with the United States of America for the delivery of Colorado River water as authorized by the *Boulder Canyon Project Act* (Act of December 21, 1928; 45 Stat. 1057, as amended). Pursuant to such contract, IID is entitled along with certain other entities, including CVWD, to beneficial consumptive use of certain quantities of Colorado River water.
- D. The service area of CVWD is divided into an upper valley and lower valley which have groundwater basins (collectively, "Basins")
- E. IID desires to acquire storage space from CVWD and CVWD desires to provide storage space to IID in the Basins to store Colorado River water ("IID Water") on the terms and conditions set forth herein.

NOW THEREFORE, IN CONSIDERATION OF THE COVENANTS AND AGREEMENTS CONTAINED IN THIS AGREEMENT AND FOR OTHER GOOD AND VALUABLE CONSIDERATION, THE RECEIPT AND SUFFICIENCY OF WHICH THE PARTIES HEREBY ACKNOWLEDGE, IID AND CVWD AGREE THAT THE TERMS OF THIS AGREEMENT ARE AS FOLLOWS:

ARTICLE I

DEFINITIONS

1.1 Except as set forth in the body of this Agreement, all capitalized terms shall have the meanings set forth in

Exhibit "A" attached hereto and by this reference incorporated herein.

ARTICLE II

STORAGE OF WATER

2.1 (a) Subject to the availability of storage in the Basins and the terms and conditions set forth herein, CVWD agrees to provide to IID storage for IID Water in the Basins. The determination of whether there is storage availability in the Basins shall be made by CVWD in its reasonable discretion. In determining the availability of storage capacity in the Basins, if any, CVWD shall assess (i) whether there is physical availability of space in the Basins to store water, (ii) whether the delivery of water by IID will potentially interfere with the delivery, recharge and storage of water by CVWD or other parties with pre-existing rights, (iii) whether the facilities exist ('Recharge Facilities,' 'Additional Recharge Facilities' and 'IID Recharge Facilities' as defined in Article III) to recharge and store the water into the Basins, and (iv) whether CVWD can reduce its consumptive use of Colorado River water in an equal amount for delivery by exchange to IID ('Return Water'). (It is the intent of the Parties that CVWD provide Return Water to IID by reduction of the consumptive use of Colorado River water by CVWD.)

(b) The rights of IID to store water in the Basins shall be subject to: (i) CVWD's storage needs in the Basins as determined by CVWD in its sole and absolute discretion, but subject to its good-faith obligation to IID under this Agreement; (ii) the pre-existing rights for the storage needs of the Metropolitan Water District of Southern California, a California public agency ("MWD"); (iii) the storage needs of certain public agencies with preexisting rights, which agencies are more particularly listed on Exhibit "B" attached hereto and by this reference incorporated herein; and (iv) Article IV below. CVWD, MWD and those entities listed on Exhibit "B" shall sometimes be referred to herein, collectively as the "Pre-existing Right Holders."

2.2 (a) IID shall provide written notice ("Storage Notice") to CVWD by October 1 of the preceding year in which IID desires to deliver Colorado River water to CVWD for the purpose of storage of such water in the Basins. The Storage Notice shall include the proposed acre feet to be stored in the Basins during the Calendar Year and the proposed delivery schedule of such water.

By December 1, prior to the year of proposed storage, CVWD shall provide written notice to IID of the amount of IID Water which may be stored in the Basins, if any, during the next calendar year and the schedule for acceptance of such water.

Notwithstanding the foregoing, IID acknowledges that, at the time of the actual delivery by IID of the IID Water, CVWD may not be able to store the IID Water due to natural disasters, acts of God or other reasons beyond CVWD's control. For these reasons if CVWD cannot store the agreed to IID Water in the Basins, IID agrees to waive and release all claims against CVWD and its officers, directors, employees, agents, successors and assigns (collectively, "Released Parties") arising from or in connection with the failure to store IID Water in the Basins or any loss in connection therewith.

ARTICLE III

RECHARGE FACILITIES

3.1 It is the intent of CVWD to locate sites and construct facilities to recharge and store water into the Basins to accommodate a recharge capacity estimated to be 80,000 acre feet per year ('Recharge Facilities'). At the time of the execution of this Agreement, CVWD has (i) identified one or more locations acceptable to CVWD for the recharge of water into the Basins and (ii) proceeding to design and construct facilities to meet the intent of the Recharge Facilities noted above. IID's right to store IID Water at these facilities shall be subordinate to CVWD and the Pre-Existing Right Holders. Additional sites and facilities could be developed pursuant to the following Articles 3.2 through 3.5, and CVWD may also use "in lieu" recharge to recharge and store water in the Basins.

3.2 At any time during the term of this Agreement IID may, by written notice to CVWD, request that CVWD attempt to identify additional locations for recharge facilities or "in lieu" recharge opportunities which are satisfactory to recharge additional water into the Basins, in the sole and absolute opinion of CVWD, but subject to CVWD's good-faith obligation to IID under this Agreement. CVWD may, but shall not be obligated to, undertake such commission if IID agrees to be responsible for all costs and expenses incurred by CVWD. Upon written notice from CVWD, IID shall deposit such sum with CVWD as shall be reasonably required by CVWD ("Search Deposit"). The Search Deposit shall be held by CVWD for all costs and expenses incurred by CVWD to attempt to

locate or cause to be located, adequate locations to recharge water into the Basins. IID hereby authorizes CVWD to use the Search Deposit to offset costs and expenses, including staff and other labor costs, related to the foregoing. If further funds are necessary and based on a proper accounting of the Search Deposit, IID shall, within thirty (30) days after written demand, deposit funds with CVWD in an amount CVWD and IID considers sufficient to pay or reimburse CVWD's expenses and costs. CVWD shall not be required to undertake or continue to identify the location of additional sites unless and until IID delivers to CVWD the Search Deposit and the additional monies requested by CVWD and agreed to by IID. Once CVWD has provided written notice to IID that sites exist or do not exist, any excess or unused Search Deposit funds will be reimbursed to IID.

3.3 In the event CVWD identifies acceptable additional sites or in-lieu recharge opportunities, CVWD shall notify IID, in writing, of the location thereof and whether CVWD shall design and construct, or cause to be designed and constructed 'Additional Recharge Facilities' consisting of the following: water transmission facilities if required, recharge facilities, and pumping facilities ('Recovery Wells'), if required, to extract water from the Basins at such locations. In such event, IID's right to store IID Water at such sites shall only be subordinate to CVWD and not the Pre-Existing Right Holders.

3.4 If CVWD does not elect to construct the Additional Recharge Facilities or develop the additional in-lieu recharge opportunities, IID may elect to require CVWD to design and construct recharge facilities or in-lieu recharge opportunities at the identified site(s), 'IID Recharge Facilities'. In such event, IID shall pay all costs and expenses incurred or accrued in connection with the design and construction of the IID Recharge Facilities in accordance with the following:

(a) CVWD shall employ (with IID's approval and oversight), at IID's cost and expense, a qualified professional engineering firm to plan, design and prepare detailed construction plans and specifications for the IID Recharge Facilities in full and complete accordance with CVWD's design criteria and standards. Prior to hiring the engineering firm, CVWD shall notify IID, in writing, of the initial estimated cost of the engineering firm to complete the foregoing. IID shall deposit such sum with CVWD the amount set forth in the initial estimate plus an additional fifteen percent as a contingency amount ("Engineering Deposit"). The Engineering Deposit shall be held by CVWD for all costs and expenses incurred by CVWD pursuant to the agreement with the engineering firm. IID hereby authorizes

CVWD to use the Engineering Deposit to offset costs and expenses related to the foregoing. If further funds are necessary and IID agrees based on a proper accounting from CVWD, IID shall, within thirty (30) days after written demand, deposit funds with CVWD in an amount CVWD considers sufficient to pay or reimburse CVWD's costs and expenses. CVWD shall not be required to retain or continue the services of an engineering firm unless and until IID delivers to CVWD the Engineering Deposit and the additional funds requested by CVWD. Any excess or unused Engineering Deposit funds will be reimbursed to IID.

(b) IID shall pay or reimburse CVWD for (i) compliance with all laws, including environmental laws and all requirements of the Federal Endangered Species Act and the California Endangered Species Act, arising out of or in connection with, construction of the IID Recharge Facilities and for compliance with all (ii) conditions and mitigation measures of each such consent or permit which must be satisfied in connection therewith. The term "environmental laws" shall include, without limitation, the California Environmental Quality Act, the National Environmental Policy Act and other applicable state and federal environmental laws.

(c) Following receipt of CVWD's and IID's approval of the design and construction plans and specifications and compliance with the environmental laws, CVWD shall employ a contractor to install the IID Recharge Facilities. IID shall pay all costs and expenses associated with the construction of the IID Recharge Facilities.

Prior to hiring the contractor, CVWD shall notify IID, in writing, of the initial estimated cost to construct the IID Recharge Facilities. IID shall deposit such sum with CVWD plus an additional fifteen percent as a contingency amount ("Construction Deposit"). The Construction Deposit shall be held by CVWD for all costs and expenses incurred by CVWD pursuant to the agreement with the contractor and inspections and other services relating to the construction. IID hereby authorizes CVWD to use the Construction Deposit to offset costs and expenses related to the foregoing. If further funds are necessary and IID agrees based on a proper accounting by CVWD, IID shall, within thirty (30) days after written demand, deposit funds with CVWD in an agreed to amount CVWD considers sufficient. CVWD shall not be required to retain or continue the services of a contractor unless and until IID delivers to CVWD the Construction Deposit and additional funds requested by CVWD. Any excess or unused Construction Deposit funds will be reimbursed to IID.

3.5 In the event IID has paid all of the costs set forth in sections 3.1 through 3.4, IID may request storage of IID Water pursuant to the provisions of Article II at the IID Recharge Facilities; and IID's right to recharge and store IID Water at

such IID Recharge Facilities shall be subject to availability of storage capacity in the Basins as determined by CVWD in its reasonable discretion. If such capacity exists, such IID Water storage shall be superior or senior to the Pre-Existing Right Holders, and IID's right to call for Return Water shall be subject to available capacity in the delivery facilities to deliver or allow the stored water to be used in CVWD's service area. Such reasonable discretion on the part of CVWD shall include a determination that said existing capacity is or will be needed by CVWD pursuant to its groundwater management plan during the relevant IID storage period.

3.6 At the termination of this Agreement, ownership of said IID Recharge Facilities shall revert to CVWD.

ARTICLE IV

DELIVERY OF IID WATER TO CVWD FOR RECHARGE

4.1 IID shall deliver the IID Water to CVWD at the Coachella Canal Heading on the All-American Canal for delivery of the IID Water through the Coachella Canal or such other location as shall be agreed to by the Parties ("Point of Delivery").

4.2 Notwithstanding the Point of Delivery, the risk of not delivering the IID Water to the Recharge Facilities, Additional Recharge Facilities and/or the IID Recharge Facilities shall remain with IID until such water has been delivered to the recharge facilities unless such non-delivery is a result of the gross negligence or willful misconduct of CVWD arising out of or in connection with the foregoing. IID agrees to waive and release all claims against CVWD arising from or in connection with the foregoing. Thus, for example, if there is a break in the Coachella Canal, and IID Water is lost due to the break, CVWD shall have no responsibility or liability to IID due to the loss of IID Water.

4.3 All IID Water delivered by IID to CVWD shall be measured by measuring devices and equipment installed or existing at the delivery structures at the Point of Delivery. In the event water is delivered to CVWD concurrently with the IID Water, the amount of IID Water shall be the total amount of water purportedly delivered less the total amount of water purportedly delivered to CVWD.

ARTICLE V

PAYMENT TO CVWD FOR STORAGE AND RECHARGE OF IID WATER

5.1 Before IID Water is delivered to CVWD for recharge and

storage, IID shall be notified of all costs including operations, maintenance, pro rated capital costs of the Recharge Facilities other than IID Recharge Facilities, administration and necessary consents, approvals, permits, licenses or entitlements, if any, from all groundwater authorities for the purposes necessary to implement the provisions of this Agreement. In addition, CVWD shall notify IID of all costs for compliance with all environmental laws and requirements of the Federal Endangered Species Act, arising out of or in connection with, transmission and delivery, recharge and storage of IID Water.

5.2 If IID agrees with these costs for the recharge and storage of IID Water in the Basins and IID pays to CVWD all costs and expenses incurred by or in connection with the transmission of IID Water from the Point of Delivery to the Recharge Facilities, Additional Recharge Facilities, and/or IID Recharge Facilities and the recharge and storage of IID Water through the Recharge Facilities, Additional Recharge Facilities and/or IID Recharge Facilities into the Basins in accordance with the formula attached as Exhibit "C" hereto and by this reference incorporated herein, and CVWD shall recharge and store the IID Water pursuant to this Agreement.

5.3 Any dispute arising hereunder concerning actual or estimated costs and/or expenses, including appropriate allocation thereof among various entities including any Party hereto and whether before or after CVWD issues an invoice therefor to IID, shall be resolved following the procedures for the resolution of disputes set forth in Article 17, Sections 17.1 and 17.2 of the "Agreement For Acquisition of Conserved Water" between the Parties hereto dated October 10, 2003.

ARTICLE VI

IID'S STORAGE ACCOUNT

6.1 On the execution of this Agreement, CVWD shall establish an account for water stored in the Basins for the benefit of IID ("IID's Storage Account").

6.2 The Parties acknowledge that there shall be a loss of a certain amount of IID Water from the Point of Delivery to the recharge of such water into the Basins due to evaporation, canal leakage and other like or similar causes. The Parties agree that for every acre foot delivered to CVWD at the Point of Delivery, five percent (5%) shall be deducted for such loss ("Delivery Loss").

6.3 The Parties acknowledge that there shall be a loss of a certain amount of IID Water after it is stored in the Basins. The Parties hereby agree that for every acre foot of IID Water delivered to CVWD at the Point of Delivery less Delivery Loss

pursuant to Article 6.2, IID shall be deemed to lose five percent (5%) of water per year due to such loss ("Storage Loss"). The annual loss shall be prorated over a three hundred sixty five day (365) period beginning on the day the IID Water is delivered to CVWD.

6.4 (a) Each month, IID's Storage Account shall be increased by the amount of IID Water delivered to the Point of Delivery described in section 4.1.

(b) IID's Storage Account shall be decreased by (i) the amount of Colorado River water returned to IID pursuant to the terms of Article VII below; (ii) any loss of IID Water not due to the gross negligence or willful misconduct of CVWD pursuant to Article 4.2 above, (iii) any amount of water calculated as a Delivery Loss per Article 6.2 above; and (iv) any amount of water calculated as a Storage Loss per Article 6.3 above.

ARTICLE VII

RETURN OF STORED WATER

7.1 IID shall provide written notice ("Return Water Notice") to CVWD by October 1 of the preceding year in which IID desires CVWD to return water ("Return Water") to IID. The Return Water Notice shall include the amount of Return Water requested by IID.

7.2 By December 1, prior to the year IID desires CVWD to provide Return Water, CVWD shall notify IID whether IID's Storage Account contains adequate water to satisfy IID's request and whether this water can be delivered to IID by exchange at the Imperial Dam Diversion Facilities. It is the intent of the Parties that CVWD provide Return Water to IID by reduction of the consumptive use of Colorado River water by CVWD.

7.3 CVWD performs its obligations to make the Return Water available for IID by reducing its consumptive use of the Colorado River water at the Imperial Dam by an amount equal to the lesser of (a) the amount of Return Water requested in the Return Water Notice, or (b) the amount of water listed in the IID Storage Account on January 1 of the Agreement Year the Return Water is to be delivered to IID; provided that CVWD shall not be required to make the Return Water available to IID greater than the maximum possible reduction of the consumptive use of Colorado River water by CVWD. When CVWD acts in that manner, CVWD has satisfied its obligation to make Return Water available for acquisition. IID accepts responsibility for the Return Water at the Imperial Dam.

IID bears the sole risk and responsibility of transporting the Return Water to its service area and any and all Conveyance

Losses shall be borne by IID.

7.4 IID acquires the Return Water beginning on January 1 of the Agreement Year in which CVWD shall provide the Return Water to IID. IID has the complete discretion within an Agreement Year on the scheduling of its diversions of the Return Water from Imperial Dam to IID's service area, subject to CVWD not being injured by reduced flow through the Coachella Canal.

ARTICLE VIII

TERM

8.1 This Agreement shall terminate at the earlier of seventy-five (75) years after the Benchmark Date; or concurrently with the termination of the Quantification Settlement Agreement.

8.2 At the end of the term or upon the early termination of this Agreement, neither the terms of this Agreement or the conduct of the Parties in performance of this Agreement, shall be construed to enhance or diminish the rights of either Party as such rights existed at the execution date, including without limitation, rights arising from the application of principles of reliance, estoppel, intervening public use, domestic or municipal priority, domestic or municipal shortage or emergency or equitable apportionment.

8.3 At the end of the term or upon early termination of this Agreement IID's Storage Account shall be reduced to zero. IID shall not be entitled to any compensation or replacement water for later storage in the Basins.

ARTICLE IX

PAYMENT

9.1 Invoices will be sent annually on June 1 itemizing the amount due to CVWD pursuant to the terms of this Agreement. The invoice shall also specify the date of mailing IID will send by the following July 1, a statement of acceptance of the invoice, or a statement detailing any disagreement in the amount due and owing. Payment of the undisputed amount and fifty percent (50%) of any disputed amount of any such invoice shall be due on the following August 1 ("Due Date"). Payment of the balance of any unpaid disputed amount or refund of any of the paid disputed amount shall be due on the tenth (10th) business day following final resolution of the payment dispute.

9.2 Every payment to CVWD required under this Agreement must be made in lawful money of the United States of America, to the order of CVWD and paid by wire transfer. The initial wire

transfer instructions are as follows:

Payment will be considered made upon confirmation of the funds being transferred and received by CVWD's bank on or before the Due Date, notwithstanding any clearing time or delay in CVWD's bank releasing funds to CVWD. CVWD may change these wire transfer instructions by giving a notice in accordance with section 13.1 below.

9.3 Payment of the amount required shall be delinquent if not received by CVWD before the close of crediting activity on the Due Date. In the event that IID is delinquent in the payment of any amount required, IID shall pay an additional charge ("Late Payment Charge") equal to one percent (1%) of the delinquent payment for each month or portion thereof that such payment remains delinquent.

ARTICLE X

CONDITIONS TO THE PARTIES' OBLIGATIONS

10.1 The obligations of the Parties under this Agreement are subject to the IID/CVWD Acquisition Agreement becoming effective.

ARTICLE XI

DEFAULT

11.1 Each of the following constitutes an "Event of Default" by CVWD under this Agreement:

(a) CVWD fails to perform or observe any term, covenant or undertaking in this Agreement that it is to perform or observe and such default continues for forty-five (45) days from a Notice of Default being sent in the manner provided in section 13.1.

(b) Any warranty, representation or other statement made by or on behalf of CVWD and contained (i) in this Agreement or (ii) in any other document furnished in compliance with or in reference to this Agreement is on the date made, or later proves to be false, misleading or untrue in any material respect.

11.2 Each of the following constitutes an Event of Default by IID under this Agreement:

(a) IID fails to pay the required amount by the Due Date. If IID fails to pay the amounts required hereunder by the Due Date, that delinquent payment will bear a late payment

charge as set forth in section 9.1, until paid in full.

(b) IID fails to perform or observe any term, covenant or undertaking in this Agreement that it is to perform or observe and such default continues for forty-five (45) days from a Notice of Default being sent in the manner provided in section 13.1.

(c) Any warranty, representation or other statement made by or on behalf of IID and contained (i) in this Agreement or (ii) in any other document furnished in compliance with or in reference to this Agreement is on the date made, or later proves to be false, misleading or untrue in any material respect.

ARTICLE XII

REMEDIES

12.1 Each Party recognizes that, apart from disputes regarding costs and expenses which are subject to resolution under the provisions of Section 5.3 above, the rights and obligations of the Parties under this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party does not perform in accordance with this Agreement, the other Party will likely suffer harm curable only by the imposition of an injunction requiring specific performance. Thus, each of the Parties agrees that any breach of this Agreement by any Party shall entitle the non-breaching Party to injunctive relief, including but not limited to, a decree of specific performance, in addition to any other remedies at law or in equity that may be available in the circumstances.

12.2 The Parties do not intend that any right or remedy given to a Party on the breach of any provisions under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delay in exercising any right or remedy, the non-breaching Party does not thereby waive the right or remedy. In addition, no single or partial exercise of any right, power or privilege precludes any other or further exercise of a right, power or privilege granted by this Agreement, or otherwise.

12.3 Each Party acknowledges that it is a "local agency" within the meaning of section 394(c) of the California Code of Civil Procedure (Code Civ.Proc.). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under section 394(a) of the Code of Civil Procedure, as a matter of law be subject to:

(a) Being transferred to a "Neutral County," or instead having a disinterested judge for a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.

(b) Each Party hereby:

(i) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action;

(ii) Waives the usual notice required under the law-and-motion provisions of *Rule 317 of the California Rules of Court*;

(iii) Consents to having any motion under *section 394(c)* heard with notice as an *ex parte* matter under *Rule 379 of the California Rules of Court*; and

(iv) Acknowledges that this Agreement, and in particular this section 13.2, may be submitted to the court as part of the moving papers.

(c) Nothing in this section, however, shall impair or limit the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

12.4 This Article shall not apply to disputes regarding costs and expenses which disputes shall be resolved under Section 5.3 of Article V above.

ARTICLE XIII

GENERAL PROVISIONS

13.1 All notices, requests, demands or other communications under this Agreement must be in writing, and sent to the addresses of each Party set forth below. Notice will be sufficiently given for all purposes as follows:

Personal Delivery. When personally delivered to the recipient. Notice is effective on delivery.

Certified Mail. When mailed certified mail, return receipt requested, postage prepaid. Notice is effective on receipt, if a return receipt confirms delivery.

Overnight Delivery. When delivered by an overnight

delivery service such as Federal Express, charges prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.

Facsimile Transmission. Notice is effective on receipt, provided that the facsimile machine provides the sender a notice that indicates the transmission was successful, and that a copy is mailed by first-class mail on the facsimile transmission date.

Addresses for purpose of giving notice are as follows:

IID: Imperial Irrigation District
Attention: General Manager

Mail: P.O. Box 937
Imperial CA 92251

Personal/
OvernightPersonal 333 E Barioni
Blvd
Overnight:Imperial CA 92251
Telephone: 760-339-9477
Facsimile: 760

CVWD: Coachella Valley Water
District
Attention: General Manager/Chief
Engineer
Mail: P.O. Box 1058
Coachella CA 92236

Personal/ Highway 111 and Avenue 52
Overnight: Coachella CA 92236
Telephone: 760-398-2651
Facsimile: 760-398-3711

(a) A correctly addressed notice that is refused, unclaimed or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that notice was refused, unclaimed or deemed undeliverable by the postal authorities, messenger or overnight delivery service.

(b) A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

13.2 No waiver of a breach, failure of condition or any right or remedy contained in or granted by the provisions of this

Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right or remedy. No waiver of a breach, failure of condition or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

13.3 This Agreement may be executed in two or more counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

13.4 This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

13.5 Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

13.6 This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to conflict of law provisions.

13.7 This Agreement is and will be binding upon and will inure to the benefit of the Parties and upon dissolution, the legal successors and assigns of their assets and liabilities. No Party may assign any of its rights or delegate any of its duties under this Agreement and any assignment or delegation made in violation of this Agreement shall be void and of no force or effect.

13.8 This Agreement (including the appendices and exhibits hereto constitutes the final, complete and exclusive statement of the terms of the Agreement among the Parties pertaining to its subject matter and supersedes all prior and contemporaneous understandings or agreements of the Parties. No Party has been induced to enter into this Agreement by, nor is any Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

13.9 This Agreement may be supplemented, amended or modified only by the written agreement of the Parties. No supplement, amendment or modification will be binding unless it is in writing and signed by all Parties.

13.10 The Parties hereby agree that during the term of this

Agreement that IID and its representatives shall have the right, during business hours and upon three (3) business day written notice, to have access to the books and records with respect to IID's Storage Account. CVWD shall be required to retain books and records for a three (3) year period after any Calendar Year.

13.11 If the performance of this Agreement, or any obligation hereunder, is interfered with by fire, explosion, an act of God, war, revolution, labor strife, civil commotion, or any act of public enemies, notwithstanding anything contained herein, the failure or delay in performance by either party shall be excused on a day by day basis to the extent of such interference provided that the Party so affected uses it reasonable efforts to remove such causes of non-performance.

WHEREFORE, the Parties hereto have executed this Agreement on the date set out above.

CVWD:

COACHELLA VALLEY WATER
DISTRICT, a California County
Water District

By _____
Its: General Manager-Chief
Engineer

By _____
Its: _____

IID:

IMPERIAL IRRIGATION DISTRICT,
a California Irrigation
District

By _____
Its: _____

By _____
Its: _____

LIST OF EXHIBITS

EXHIBIT "A"	DEFINITIONS
EXHIBIT "B"	PRE-EXISTING RIGHT HOLDERS
EXHIBIT "C"	COST FORMULA

EXHIBIT A

DEFINITIONS

1998 IID/SDCWA Transfer Agreement - The Agreement for Transfer of Conserved Water by and between IID and the San Diego County Water authority dated April 29, 1998.

Agreement Year - As defined in Section 1.1(i) of the 1998 IID/SDCWA Transfer Agreement.

Benchmark Date - As defined in Section 1.1(r) of the 1998 IID/SDCWA Transfer Agreement.

Calendar Year - The twelve (12)-month period running from January 1 through December 31.

California Environmental Quality Act (CEQA) - California Public Resources Code §§ 2100 et seq.

Conveyance Losses - The actual loss of water to evaporation, seepage, or other similar cause resulting from any transportation of Conserved Water from Imperial Dam to the CVWD service area or to the MWD service area, as the case may be.

IID/CVWD Acquisition Agreement - The Agreement for Acquisition of Conserved Water by and between IID and CVWD dated October 10, 2003.

National Environmental Policy Act ("NEPA") - Title 4, United States Code § 4321 et seq., 40 Code of Federal Regulations § 1500.1 et seq.

Quantification Settlement Agreement - The agreement of same title among CVWD, The Metropolitan Water District of Southern California and the IID dated October 10, 2003.

EXHIBIT B
DESERT WATER AGENCY

EXHIBIT C

COST FORMULA

Within thirty (30) days of the identification of Recharge Facilities or Additional Recharge Facilities by CVWD, or the identification of IID Recharge Facilities by IID, CVWD and IID shall meet and confer and negotiate in good faith to set a formula by which IID shall pay CVWD for all costs and expenses incurred by CVWD in connection with the transmission of water from the Point of Delivery, to the Recharge Facilities, into the basins, and the delivery of Return Water. Should CVWD and IID be unable to reach agreement within sixty (60) days of their initial meeting, any remaining disagreements shall be determined in accordance with Section 17.2 of the IID/CVWD Acquisition Agreement.

EXHIBIT D

EXHIBIT D

IID's Pending and Threatened Litigation Disclosure

The following actions, suits, legal or administrative proceedings, or governmental investigations are pending, or (to IID's knowledge) have been threatened relating to the performance of this Agreement. By listing the items here, IID does not imply that any of these matters have merit and, in fact, IID disputes the legitimacy of all the below matters. They are provided here simply as a disclosure of their existence or threat, per the Agreement.

1. United States Part 417 Proceeding (2003) -- IID is currently engaged in a dispute with the United States over IID's 2003 water order, with an appeal to the Secretary of the Interior from the Regional Director's Final Determination due to be filed later this month. The 2003 Part 417 review of IID will be terminated by the United States and IID's order approved as part of the QSA settlement.
2. United States Part 417 Proceeding (Future Years) -- Though IID disputes the legal ability of the United States to review IID's water use under Part 417, the United States contends that it has the right to review IID's water use under that regulation on a yearly basis. In future years such review is required to be in compliance with obligations of the United States in the QSA package of documents, and IID and the United States have reserved their litigation rights.
3. IID v. United States, et al. (Case No. 03 CV 0069W (JFS), Southern District California) This case pertains to IID's 2003 water order. It is currently stayed and will be dismissed as part of the overall QSA settlement.
4. Reasonable Beneficial Use Lawsuits/Actions By Junior Appropriators and Others -- Junior appropriators MWD and CVWD have threatened to sue IID over its reasonable beneficial use of water. The QSA settlement controls MWD's and CVWD's rights to commence such proceedings during the QSA. Other entities not constrained by the QSA may sue IID.
5. Morgan, et al. v. Imperial Irrigation District (Case No. L-01510, Superior Court of California, Imperial County)-- This is a lawsuit against IID and "All Persons Interested" brought by certain landowners in IID. This "Morgan Group" of plaintiffs consists of disgruntled landowners in the Imperial Valley who have asserted in this case, and/or in other places at other times, the following general issues: (a) they have "revoked" their status as beneficiaries and thus IID has no authority over Colorado River water; (b) IID has mismanaged its water right; (c) the landowners have the right to make their own deals with third parties to transfer water outside the IID service area; (d) IID cannot agree to the QSA without landowner consent; (e) methods being discussed by IID to implement the conservation programs required under the QSA documents are unfair and improper; (f) other similar complaints about IID and its management.
6. Imperial Valley Actions -- Many residents, landowners, farmers, and groups in the Imperial Valley are not in agreement with IID over the terms of the QSA, and have threatened to take action. The exact nature and extent of such possible action is unknown to IID.

7. Environmental Lawsuits/Actions -- Though the QSA and transfers were subject to extensive environmental review and provide for extensive environmental mitigation, various environmental groups and citizens have asserted that mitigation is inadequate or that the environmental documentation is inadequate. The exact nature and extent of such possible action is unknown to IID.

8. Lining Of All American Canal -- Many persons, both in the United States and in Mexico, appear to use groundwater that is being supplied by seepage from the All-American Canal. Lining will reduce access to seepage groundwater once the canal is lined. Persons have complained about this situation, and it is possible that such persons (and perhaps Mexico) will attempt to stop such lining.

9. Indian Tribes -- Certain Indian tribes border the Colorado River and have complained in the past to IID that any reductions in IID water orders so that more water can be taken by MWD or SDCWA at Parker Dam will adversely affect their power generation and their on-river wildlife habitat.

EXHIBIT E

EXHIBIT E

NO PENDING OR THREATENED DISPUTES

There are no actions, suits, legal or administrative proceedings, or governmental investigations pending or threatened against or affecting CVWD which would adversely impact CVWD's ability to undertake the performance contemplated by this Agreement other than the following:

1. A general threat by the Center for Biological Diversity to sue challenging QSA transfers and environmental mitigation.
2. The Navajo Nation vs. United States Department of the Interior, et al., USDC for the District of Arizona, Case No. CIV 03 0507 PCTPG.
3. The Morgan Group lawsuit against IID.
4. The County of Imperial suit under CEQA challenging the State Water Resources Control Board Order Conditionally Approving the IID - SDCWA transfer and the CVWD/MWD acquisition.



IMPERIAL IRRIGATION DISTRICT



COACHELLA VALLEY WATER DISTRICT

October 10, 2003

Ron Gastelum
Chief Executive Officer
The Metropolitan Water District
of Southern California
Post Office Box 54153
Los Angeles, California 90054

Dear Mr. Gastelum:

Subject: Palo Verde Irrigation District Program

The undersigned, Imperial Irrigation District (IID) and Coachella Valley Water District (CVWD) provide this consent to The Metropolitan Water District of Southern California (MWD) with respect to a proposed transfer of conserved water from the Palo Verde Irrigation District (PVID) to MWD. This consent is provided pursuant to Section 4.3 of the Quantification Settlement Agreement (QSA).

For the purposes of this consent, the term "PVID Agreements" shall mean, collectively, the program agreement between MWD and PVID and any related land agreements with participating landowners and lessees within PVID contemplated by PVID and MWD under principles of agreement approved by MWD and PVID pertaining to the development by PVID of a flexible water supply for MWD of approximately 100,000 AFY under a land fallowing program to be funded by MWD, as the same may be from time to time modified or amended for a period of time not to exceed 35 years from the date of this letter or the term of the QSA which ever is longer; and the term "PVID Water" shall mean the water to be Made Available to MWD as a result of the implementation of the PVID Agreements. Otherwise terms used herein with initial capital letters shall have the same meaning as the defined terms set forth in the QSA.

Anything in the QSA, including Section 4.3 thereof, or any other agreement to the contrary notwithstanding, IID and CVWD hereby consent as follows:

Ron Gastelum
Chief Executive Officer
The Metropolitan Water District
of Southern California

-2-

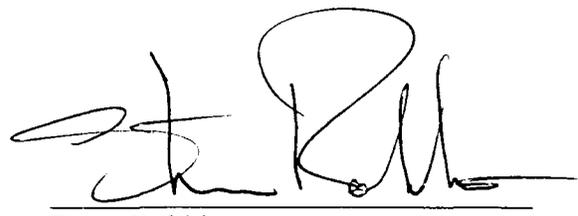
October 10, 2003

- (1) Subject to paragraph (3) below, MWD shall be entitled to divert and Consumptively Use all PVID Water Made Available to MWD pursuant to the PVID Agreements in each calendar year during the entire term of the PVID Agreements, whether or not the QSA remains in effect for the entire 35 year term of the PVID Agreement, and irrespective of the nature or effect of any shortage, normal, surplus or other condition of the Colorado River determined by the Secretary for such year.
- (2) Subject to paragraph (3) below, IID and CVWD shall not, directly or indirectly, claim, pump, divert, use or demand any PVID Water Made Available to MWD pursuant to the PVID Agreements, nor shall it seek or support any action in any federal or state legislative, administrative or judicial forum that is inconsistent with this consent.
- (3) IID and CVWD understand and consent to the following:
 - a) PVID Water shall be conserved as a result of land fallowing within PVID.
 - b) Such fallowing will reduce the amount of water diverted from the Colorado River by PVID.
 - c) Such PVID Water, together with such water as PVID may divert for use within PVID, will not be available for use by and will not be included in the amount of Colorado River water available to IID and CVWD under the agricultural priority of 3.85 MAF. Aside from any impact that such reduction in the agricultural priority may have on IID and CVWD, this consent of IID and CVWD is subject to and conditioned upon, for each and every year of the entire term of the PVID Agreements, no other injury to IID and CVWD being caused by the PVID Agreements, as "no injury" is defined under California law in connection with Water Code sections 1702 and 1706. By reference and use of this "no-injury" definition, the parties are not expressing or waiving any position each may have as to the applicability of California law. Rather, they are merely incorporating a definition by agreement for purposes of this consent.

Yours very truly,



Jesse Silva
General Manager
Imperial Irrigation District



Steve Robbins
General Manager-Chief Engineer
Coachella Valley Water District

**AGREEMENT TO RESOLVE
 SALTON SEA FLOODING DAMAGE ISSUES
 BY AND BETWEEN
 IMPERIAL IRRIGATION DISTRICT
 AND
 COACHELLA VALLEY WATER DISTRICT**

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**AGREEMENT TO RESOLVE
SALTON SEA FLOODING DAMAGE ISSUES**

THIS AGREEMENT to Resolve Salton Sea Flooding Damage Issues ("Agreement") is made this ____ day of _____, 2003, by and between the IMPERIAL IRRIGATION DISTRICT, an irrigation district formed pursuant to the California Irrigation District Act, California Water code §§ 21,000, et seq. ("IID"), and the COACHELLA VALLEY WATER DISTRICT, a county water district formed pursuant to the California County Water District Act, California Water Code §§ 31,000, et seq. ("CVWD"). IID and CVWD are sometimes referred to individually as "Party" and collectively as "the Parties."

RECITALS

A. IID and CVWD each import Colorado River water to serve lands within their respective service areas, and each operates a system of drains which provide an irrigation drainage service to said lands. This irrigation drainage and, at times, storm runoff is collected by these drainage systems and discharged into the Salton Sea, a sump which is the lowest point in the 800 square mile watershed. These waters commingle with irrigation drainage waters, municipal wastewater and storm runoff from the Republic of Mexico and natural inflow (precipitation, runoff and flood waters) to sustain the existence of the Salton Sea. The Salton

Sea serves as an essential drainage reservoir for the irrigated areas in the Imperial, Coachella and Mexicali Valleys. The Salton Sea has no outlet, and its surface elevation fluctuates, depending upon the differences between the amounts of inflow to the Sea and evaporation from it.

B. A study by the United States Geologic Survey in the 1920's concluded that the surface elevation of the Salton Sea could not be sustained above the -220 foot contour because at that level, evaporation would likely offset inflows. As a result of that study, federal lands in, around and under the Sea below the -220 elevation were set aside as an agricultural drainage repository.

C. There are about 260,000 acres of land in the Salton Sea Basin below elevation -220. The United States owns approximately 110,000 acres ("Federal Lands") and approximately 11,700 acres, as trustee for the Torres-Martinez Band of Mission Indians ("Indian Lands"), of these lands underlying or adjacent to the Salton Sea and below the -220' contour. IID and CVWD have each recently (April, 2002) received and recorded permanent flowage easements from the United States providing rights to use these Federal and Indian Lands.

D. IID acquired, by purchase, in the early 1920's, approximately 109,500 acres of these lands below the -220' contour. The remaining lands below the -220' contour are in private ownership (except for those recently acquired as

hereafter set forth).

E. In addition to the 109,500 acres that IID already owned, the Parties have each acquired fee title to other lands below the -220' elevation, and desire to continue to acquire additional such lands as they become available in order to preserve and protect the essential drainage reservoir function of the Salton Sea and reduce the potential for new property damage claims and further desire that each party provide flowage easements over the property it owns below the -220' elevation to the other party.

F. IID contends that it is entitled to compensation from CVWD for the storage of drainage waters from CVWD on IID's land. CVWD, on the other hand, contends that it has a legal right to deposit and store its drainage waters in the Salton Sea without the payment of compensation therefor. The Parties desire to resolve this dispute by compromise.

G. From time to time, third-party owners and occupiers of lands under, adjacent to or near the Salton Sea have made claims and/or commenced legal actions against one or both Parties seeking damages and compensation for the taking or damaging of real and personal property and for personal injuries, allegedly caused by the activities of one or both of the Parties in importing Colorado River water, distributing the same for irrigation, and collecting and discharging the drainage therefrom into the Salton Sea, allegedly causing the surface level to rise

and flood the third-parties' properties ("Third-Party Claims").

H. Some of the Third-Party Claims have been settled by one or both Parties, and some remain outstanding. It is the desire of the Parties to agree to an apportionment of third-party damages between them, settle up or adjust to that apportionment by reimbursement, including interest where appropriate, and to make provision for apportionment of damages in the pending cases and in future cases, if any.

I. In recent years, IID has constructed, operated and maintained a series of dikes and other works on the margins of the Salton Sea to protect property from flood damage or further flood damage, as the case may be, and wishes to be reimbursed a share of its past and future costs and expenses based on an agreed allocation, including interest on past expenditures.

J. It is the purpose of this agreement to compromise and settle by a fair and equitable apportionment between the Parties (1) all past payments made to third parties in settlement of claims or litigation for damages allegedly caused by the Salton Sea; (2) IID's claim for damage to or rental of its own 109,500 acres; and (3) IID's costs in constructing and maintaining dikes and other protective works. In addition, IID and CVWD shall each grant to the other flowage easements over lands presently owned and those acquired hereafter that are below the -220' elevation in order to provide a drainage reservoir for their commingled waters. It is also a purpose of this Agreement to establish

policies, whereby the Parties will cooperate and share, in order to avoid future Third-Party Claims in connection with maintaining the Salton Sea as a drainage reservoir for their respective water and drainage systems.

AGREEMENT

WHEREFORE, in consideration of the mutual covenants set forth below, IID and CVWD agree as follows:

1. **No Admission of Liability**

This Agreement is entered into as a settlement and compromise of certain disputes between CVWD and IID. Nothing in this Agreement is intended to be, nor shall it be construed to be, an admission by either Party of (a) any liability, wrongdoing, negligence, malfeasance, or misfeasance by any Party or by any other person; or (b) the validity of any claim or defense made by any Party to this Agreement or by any other person. As used in this Agreement, "Person" includes corporations, associations, partnerships, governmental entities of any kind, Indian Tribes, states, the United States of America, and foreign nations. This Agreement shall be fully protected by the provisions of Federal Rules of Evidence Rule 408 and California Evidence Code section 1152. It shall not be admissible in any action, proceeding or arbitration for any purpose; provided, that any Party to this Agreement may offer it

into evidence, when relevant, for the sole and limited purpose of enforcing its provisions against the other Party.

2. Flood Damage Claims

a. Release as to Closed Cases

CVWD and IID, either separately or jointly, have negotiated and satisfied in full settlements for Third-Party flooding claims in the actions listed in Exhibit "A" attached hereto and incorporated herein by reference ("Closed Cases"). As to the Closed Cases only, CVWD and IID do hereby fully release and discharge each other, their respective successors, insurers, officers, directors, agents, and representatives from any and all claims for indemnity or contribution arising from or in connection with the defense and settlement of the Closed Cases.

b. Contribution by CVWD to Other Settlements by IID

In addition to the cases listed on Exhibit "A," IID has settled Third-Party flooding claims and cases listed on Exhibit "B." Also, listed on Exhibit "B" are purchases of lands and settlements made of claims where no lawsuit has been filed. It is agreed that CVWD shall pay to IID the sum of \$9,451,477.38 plus interest at Seven Percent (7%) from June 30, 2002, to the date of closing (as defined below) as CVWD's contribution and reimbursement to IID for (1) monies IID has paid in connection with damage claims and property acquisitions listed on Exhibit "B" plus interest on such payments at Seven Percent (7%) to

June 30, 2002, and (2) IID's claim for damage to or rental value of the 109,500 acres it owns below the -220' elevation. The agreed sum takes into account that IID has obtained fee title to, or flooding easements over, certain lands below the -220' elevation over which it will grant flowage easements to CVWD as described below in Paragraph 3; the agreed sum also reflects a credit for monies spent by CVWD for the acquisition of lands below the -220' elevation and interest thereon.

In return for such payment, IID shall release and discharge CVWD, its successors, insurers, officers, directors, agents, and representatives from any claim for further contribution or reimbursement in connection with the cases and claims listed on Exhibit "B," and shall file a dismissal of each pending case where it has the legal right to do so.

c. Future Third-Party Claims

With respect to any flood damage claims that are made against IID and/or CVWD after the effective date of this Agreement, IID and CVWD agree that responsibility for satisfying any settlement or judgment shall be apportioned 87.5% to IID and 12.5% to CVWD. If either Party, by reason of liability insurance contracts, receives payments from its insurers, such amounts shall not be taken into consideration in determining the amounts owed by (apportioned to) each Party for payment of any settlement or judgment, but the Party receiving such payment shall hold the other Party harmless from any claims for indemnity by the

insurance company making such payment.

d. Revisit of Apportionment

Either Party may give the other a written notice of desire to revisit this apportionment formula regarding claims made after the effective date of this Agreement by serving a notice on the General Manager of the other Party.

The notice shall set forth any desired change and the specific reasons for the request. The Parties shall meet at convenient times and make a good faith attempt to reach agreement regarding a change in the apportionment formula.

If the Parties fail to agree within twelve (12) months after the notice is served, the noticing party may cause the matter to be submitted to resolution pursuant to Paragraph 5 below. In reaching a conclusion, the arbitrators shall assume that the sharing percentages established by this Agreement were fair and equitable at the time the Agreement was executed. Any modifications should be the result of changed circumstances relevant to the comparative contributions of inflow to the Salton Sea from lands and works within the boundaries of the respective Parties, provided, however, that there shall be excluded from contributions by IID the flows from the Republic of Mexico that are discharged into the Salton Sea.

e. Consent to Settlements Required

No Party shall settle any Future Third-Party Salton Sea flooding Claim without the prior written consent of

the other Party. The Parties shall cooperate in efforts to amicably resolve each such future claim and shall not unreasonably withhold consent to a settlement proposed by the other Party.

f. **Waiver of CCP Section 1542**

With respect to the releases described in Subparagraphs 2a and b above and Subparagraph 4d below, each Party waives the provisions of Section 1542 of the California Civil Code which states:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor."

3. **Exchange of Flowage Easements**

In consideration for the cash payments made by CVWD to IID pursuant to Paragraph 2(b) above ("Third-Party Claims") and Paragraph 4(c) below ("Dikes"), and for the mutual exchange of flowage easements in properties described below, the Parties agree that each shall provide to the other flowage easements over lands that each presently owns and over lands that it may acquire in the future that are below the -220' elevation in the bed of the Salton Sea. The form of the flowage easement shall be in accord with Exhibit "C" hereto.

Neither party shall, by acquisition of a permanent flowage easement, acquire any right to share or participate in any rental, royalty or other payments received by the other party (i.e., the fee owner) from lessees of such property. For example, IID has leased some land below the minus 220-foot contour to lessees for geothermal development purposes. Also, neither party shall incur any liability to third persons solely by reason of receiving a permanent flowage easement from the other party. Each party's potential liability to third persons shall depend upon actions by each party which might affect third persons and applicable legal principles.

a. IID Fee Title

Exhibit "D" attached hereto and by this reference incorporated herein contains a legal description of all lands to which IID has a fee title ownership that lie below the -220' contour and underlie or are adjacent to the Salton Sea (collectively "IID Land"). The IID Land is depicted on the map attached hereto as Exhibit "E" and by this reference incorporated herein.

b. CVWD Fee Title

Exhibit "F" attached hereto and by this reference incorporated herein contains a legal description of all lands to which CVWD has a fee title ownership that lie below the -220' contour and underlie or are adjacent to the Salton Sea (collectively "CVWD Land"). The CVWD Land is depicted on the map

attached hereto as Exhibit "G" and by this reference incorporated herein.

c. IID Flooding Easements

Exhibit "H" attached hereto and by this reference incorporated herein contains a description of the lands to which IID has an interest for flooding and drainage purposes that lie below the -220' contour and underlie or are adjacent to the Salton Sea (collectively "IID Easements") and over which a flowage easement is to be granted to CVWD.

d. CVWD Flooding Easements

Exhibit "I" contains a description of the lands to which CVWD has an interest for flooding and drainage purposes that lie below the -220' contour and underlie or are adjacent to the Salton Sea (collectively "CVWD Easements") and over which a flowage easement is to be granted to IID.

e. Closing

The Closing shall take place one (1) business day after the delivery of all of the grants of easement to Chicago Title Company, El Centro, California, for recordation. The Parties shall deliver the grants of easement to said Title Company as promptly as practical after this Agreement has been duly approved and executed by the Parties. In addition, CVWD shall pay to IID in cash (or acceptable equivalent) the sum of \$9,728,442.13 plus interest of Seven Percent (7%) from June 30,

2002, until the Closing Date, as provided in Paragraph 2b (\$9,451,477.36) and Paragraph 4c (\$276,964.75) hereof. As used herein, the term "Closing" means the date and time that said payment is made and the grants of easement are recorded in the Official Records of Riverside and Imperial Counties, California.

f. Future Acquisitions

The Parties are engaged in ad hoc-type ongoing negotiations with third parties to acquire fee or flooding easement rights to property, real and personal, and other legal rights which is situated below the -220' contour.

If either party proposes to acquire a fee interest or flooding easement right from a third party owning property below the -220' contour, such Party shall give written notice to the other Party pursuant to the notice provisions of Paragraph 11 of this Agreement. The Notice shall include a description of the fee interest or flooding easement, the location of the property or flooding right and the acquisition and transaction costs. The recipient Party shall have a thirty (30) day period after receipt of such notice to elect to participate or not participate in the acquisition of the property or flooding right. If the recipient Party fails to notify the sending Party of its election to participate or not participate within such thirty (30) day period, the recipient Party shall be deemed to have elected to participate to the extent of receiving a flowage easement only. If the recipient Party receives either a fee interest or a joint

flowage easement, such Party shall pay its applicable percentage (Eighty Seven and One-Half Percent (87.5%) in the case of IID and Twelve and One-Half Percent (12.5%) in the case of CVWD) of the acquisition and transaction costs set forth in the notice within thirty (30) days of the election to participate or forty five (45) days if that Party is deemed to have elected to participate. Delinquent payments shall bear interest at the prevailing legal rate.

Each Party agrees to cooperate with the other in connection with acquisition plans to the end that each is well informed about the other's intentions as much as is practical.

4. Dikes and Protective Structures

To protect property from flooding damage from the Salton Sea, IID has built or acquired structures and taken measures to divert or contain the Salton Sea. These structures and measures include dikes, diversion ditches, sandbagging, and other remedial measures. IID has incurred costs and expenses in undertaking these actions, and CVWD is willing to reimburse IID 12.5% of said costs and expenses plus 7% interest as additional consideration for this agreement.

a. Map of Dikes and Structures

Exhibit "J" is a map showing the locations of the dikes, diversion ditches, and other structures ("IID Facilities").

b. Current Condition

IID represents and warrants to CVWD that the IID Facilities are in good condition and not in current need of repair or replacement.

c. Payment

CVWD shall pay to IID at the Closing, the sum of \$276,964.75 plus interest at 7% from June 30, 2002, to the date of the Closing as 12.5% reimbursement, CVWD's agreed share, of the past cost of construction, operation, and maintenance of the IID Facilities.

d. Release

In consideration for said payment, IID hereby releases CVWD, its successors, officers, directors, agents, and representatives from any further claim of liability by IID regarding IID's costs and expenses in connection with the IID Facilities as of the date of Closing.

e. Future Construction, Operation, Maintenance and Repair or Replacement

(1) Responsibility

After the Closing, IID shall maintain the IID Facilities in good condition and repair and shall take such other measures as necessary to avoid damage to private property, including but not limited to, replacement of existing facilities and the construction of improvements on the IID Facilities ("Future Improvements"). IID shall make reasonably necessary

repairs, structural and non-structural, as well as extraordinary, foreseen and unforeseen repairs to the IID Facilities and Future Improvements.

(2) Records

IID shall maintain good and proper records to record the annual costs incurred to maintain, repair, construct and reconstruct the IID Facilities and Future Improvements, as well as the costs to avoid damage to private property. Said records shall be similar in nature and scope as those used by IID to record the annual operation and maintenance costs in connection with the common works of the All American Canal. (See, Articles 8 and 13 of CVWD's October 15, 1934 Contract with the United States.)

(3) Consent to Future Work

Notwithstanding anything to the contrary contained herein, IID shall not construct a Future Improvement or reconstruct or replace an IID Facility without the prior written consent of CVWD, which consent shall not be unreasonably withheld. Any request by IID to construct a Future Improvement or reconstruct or replace an IID Facility, shall include the approximate cost thereof and the reasons for the construction, reconstruction or replacement thereof, including the nexus to avoiding damage to privately owned lands from floodwaters.

(4) Invoice and Payment

On or before March 1 of each year, IID shall submit a statement ("Annual Statement") to CVWD. CVWD shall pay Twelve and One-Half Percent (12.5%) thereof within thirty (30) days after receipt unless there is a dispute. The Annual Statement shall include the following:

- (a) A reasonably detailed description of the work completed during the previous year;
- (b) A reasonably detailed description of the costs incurred for the work during the previous year; and
- (c) In the event any work or costs are not directly related to the subject of this Agreement, IID shall only include in the annual statement the portion of the costs directly related to the IID Facilities.

(5) Disputes

In the event of a dispute, CVWD shall remit to IID, within thirty (30) days after receipt of an Annual Statement, both the amount of CVWD's undisputed obligation and the amount disputed, explaining reasons for and the item(s) in dispute. Payment of the unpaid disputed amount shall be due on the tenth (10th) business day following final resolution of the dispute which shall be resolved pursuant to Paragraph 5.

Delinquent payments (which shall not include disputed amounts) shall bear interest at the applicable legal rate from the date due until paid in full.

f. Inspection of Facilities

CVWD, through its officers, agents and employees shall have the right at any reasonable time to inspect the IID Facilities, Future Improvements, remedial measures and the work performed by or on behalf of IID. IID acknowledges that CVWD is under no duty to supervise or inspect any work to be done by or on behalf of IID and that any such inspection is for the sole purpose of preserving CVWD's rights hereunder.

g. Interference

In its management capacity, IID shall not construct or permit construction of any improvements, or of any grading or change in topographic conditions (except minor changes in normal repair and maintenance activities) without the prior written consent of CVWD, which consent shall not be unreasonably withheld. In addition, any construction and/or grading shall not interfere with or be detrimental to the use of the land for a drainage reservoir either for receiving Sea water or protecting its shoreline.

h. Liability to Third Persons

If, in the future, third persons are damaged by reason of failure of the dikes and protective structures to

divert or contain the Salton Sea, each party's responsibility shall be shared according to Paragraph 2(c). Provided, however, CVWD does not hereby waive any right or claim it might then have that IID failed to act reasonably in fulfilling its responsibilities pursuant to Paragraph 4(e)(1).

5. Resolution of Disputes

a. Within thirty (30) business days of the Parties identifying the existence of a dispute ("Dispute"), the General Managers of CVWD and IID (or their designees) shall meet and attempt to resolve the Dispute to their mutual satisfaction. Any such resolution shall be in writing and be binding on the Parties. Such disputes include, but are not limited to, issues about whether either Party is acting unreasonably under Paragraphs 2(e), 3(f), 4(e)(3), and 4(g).

Under Paragraph 3(f), either party may separately initiate and finalize acquisitions of property below the minus 220-foot contour. The other party's right to refuse to participate under said Paragraph 3(f) shall be limited to a disagreement about the cost of the property. Such dispute shall be resolved according to Paragraph 5, pages 17-19 whereby the arbitrators shall determine the reasonableness of the cost. The amount, as determined by the arbitrators, shall be used to determine the applicable shares for each party (87.5% for IID, and 12.5% for CVWD). If the acquisition is initiated by IID, CVWD shall receive a permanent flowage easement upon payment of

its 12.5% share. If the acquisition is initiated by CVWD, IID shall receive a permanent flowage easement upon payment of its 87.5% share.

Under Paragraph 4(e)(3), IID may initiate and complete future work, if considered appropriate. CVWD's right to object shall be limited to questions about the reasonableness of the costs which shall be resolved as set forth in Paragraph 4(e)(5).

b. Any Dispute arising out of this Agreement which cannot be resolved by agreement shall be resolved through binding arbitration by a panel of arbitrators in an arbitration proceeding conducted in a Neutral County, or such other location as the Parties may agree. Arbitration proceedings may be initiated by either Party sending a demand for arbitration to the other Party in conformance with Paragraph 11 of this Agreement (Notices). The Parties shall impanel a group of three arbitrators by each selecting an arbitrator of their choice who shall then select the third member of the panel. If the two arbitrators appointed by the Parties cannot agree on a third arbitrator within ten (10) business days from the initiation of the arbitration proceeding, the third neutral arbitrator shall be selected by the presiding judge of the Neutral County Superior Court. The third arbitrator must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts, unless the Parties agree otherwise.

Prior to the commencement of proceedings, the appointed arbitrators will take an oath of impartiality. The Parties shall use their reasonably best efforts to have the arbitration proceedings concluded within ninety (90) business days of the selection of the third panel member.

In rendering the award, the arbitrators shall determine the rights and obligations of the Parties according to the substantive and procedural laws of California. All discovery shall be governed by the Code of Civil Procedure with all applicable time periods for notice and scheduling provided therein being reduced by one-half (1/2). The arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding compliance with discovery requests shall be decided by the arbitrators. A decision by two of three arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal basis for the decision. The decision of such arbitrators shall be final and binding upon the Parties and judgment upon the decision rendered by the arbitrators may be entered in the Neutral County Superior Court.

Each party shall bear the costs incurred for the person selected by it to be an arbitrator. All other costs (including, but not limited to, reasonable fees and expenses of

counsel and expert or consultant fees and costs) incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party whom the decision is against. If the decision is not clearly against one Party, the arbitration decision shall apportion the costs between the Parties.

6. Effective Date

The effective date, when the mutual rights and obligations of the Parties shall become legally binding, shall be the date upon which the last Party to sign duly executes the Agreement.

7. Binding Agreement

Each Party represents that it has read and understands this Agreement and has been represented by legal counsel and advised by other consultants in connection with the execution of this Agreement.

This Agreement shall be binding on the Parties and their respective successors and assigns.

8. Authority

Any person signing this Agreement represents that he/she has full power and authority to do so, and, that his/her signature is legally sufficient to bind the Party on whose behalf he/she is signing.

9. **Entire Understanding**

This Agreement contains the entire understanding of the Parties with respect to the subject matter hereof, and supersedes any prior understanding between the Parties, except as set forth herein, whether written or oral. This Agreement can be amended only in writing signed by the Parties.

10. **Miscellaneous**

Lack of enforcement of any term or condition of this Agreement shall not be construed as a waiver of any rights conferred by such term or condition. Unless otherwise agreed to in writing, the failure of any Party to require the performance by the other Party of any provision hereof shall in no way affect the full right to require such performance at any time thereafter, nor shall the waiver of any provision hereof on one occasion be taken or held to be a waiver of the provision itself. Each Party has the right to pursue any available legal remedy to enforce its rights hereunder.

11. **Notices**

Any communication, notice or demand of any kind whatsoever which any Party may be required or may desire to give to or serve upon the other Party shall be in writing and delivered by personal service (including express or courier service), by electronic communication, whether by telex, telegram or telecopying (if confirmed in writing sent by registered or

certified mail, postage prepaid, return receipt requested), or by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

IID: Imperial Irrigation District
Attention: General Manager
P O Box 937
Imperial CA 92251
Telephone: 760-339-9477
Facsimile: 760-339-9392

for personal or overnight delivery:

Imperial Irrigation District
333 E Barioni Blvd
Imperial CA 92251
Attention: General Manager

copy to: Horton, Knox, Carter & Foote

895 Broadway
El Centro CA 92243
Attention: John P. Carter, Chief Counsel
Telephone: 760-352-2821
Facsimile: 760-370-0900

CVWD: Coachella Valley Water District

Attention: General Manager/Chief Engineer
P. O. Box 1058
Coachella CA 92236

for personal or overnight delivery:

Coachella Valley Water District
Attention: General Manager/Chief Engineer
Avenue 52 and Highway 111
Coachella CA 92236
Telephone: 760-398-2651
Facsimile: 760-398-3711

Copy to: Gerald D. Shoaf, Esq. & Steven B. Abbott, Esq.

Redwine and Sherrill
1950 Market Street
Riverside CA 92501-1720
Telephone: 909-684-2520
Facsimile: 909-684-9583

Any Party may change its address for notice by written notice given to the other Party in the manner provided in this Paragraph 11. Any such communication, notice or demand shall be deemed to have been duly given or served on the date personally served, if by personal service; one (1) day after the date of confirmed dispatch, if by electronic communication, or three (3) days after being placed in the U.S. mail, if mailed.

12. Further Acts

Each Party agrees to perform any further acts and to execute and deliver any documents which may be reasonably necessary to carry out the provisions of this Agreement.

13. Construction

The provisions of this Agreement shall be construed as to their fair meaning, and not for or against any Party based upon any attribution to such Party as the source of the language in question.

14. For Benefit of Parties

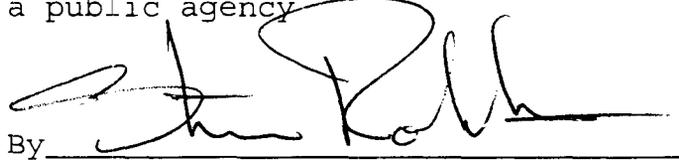
This Agreement is made solely for the benefit of the Parties hereto and their respective successors and assigns. No other person or entity may have or acquire any right by virtue of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement pursuant to duly adopted Board Resolutions and by their duly

authorized representatives on the date first above written.

CVWD:

COACHELLA VALLEY WATER DISTRICT,
a public agency

By 

Its: General Manager-Chief Engineer

By _____

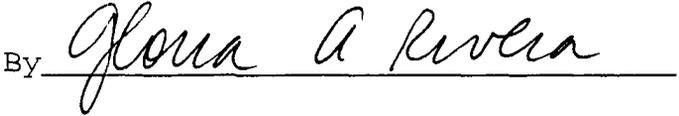
Its: Secretary

IID:

IMPERIAL IRRIGATION DISTRICT,
a public agency

By 

Its: General Manager

By 

Its: Secretary

APPROVED AS TO FORM:


Its Attorney

APPROVED AS TO FORM:

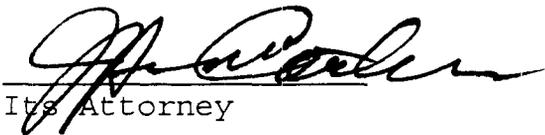

Its Attorney

Exhibit A

EXHIBIT A

CLOSED CASES

Winston Baird, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 64193 (Benson/Checkers)

Federal Emergency Management Agency v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 54809

Lowell D. Fink, et al. v. Imperial Irrigation District, Imperial County Superior Court Case Number 66502

Reginald Robert Gray, et al. v. Imperial Irrigation District, Imperial County Superior Court Case Number 66503

W.R. Holcomb, et al. v. Imperial Irrigation District, Imperial County Superior Court Case Number 61027.

Pasadena Presbyterian, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 65583 and Alan Carder, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 65582

Salton Bay Marina, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 48157.

Shady Acres, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 66917

Exhibit B

EXHIBIT B

A. Third Party Claims In Lawsuits Settled by Imperial Irrigation District:

1. James & Mary Aldridge, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 81127
2. Eldon M. Anderson, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 52749
3. John Elmore v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 52345
4. James Brown (formerly Jean Arney), et al., v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 85178
5. Elmer E. Plum v. Imperial Irrigation District, Imperial County Superior Court Case Number 89659
6. Imperial Irrigation District v. James La Fleur, et al., Imperial County Superior Court Case Number 91132
7. James LaFleur, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 88690
8. Wilbur J. Wilson, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 89376
9. Imperial Irrigation District v. Blaine Stinson, et al., Imperial County Superior Court Case Number 87659
10. Anna B. Bondy, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 90737
11. Fred S. Brown, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 90552
12. Ronald L. Clevenger, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 95059
13. John Jackson, et al. v. Imperial Irrigation District, et al., Imperial County Superior Court Case Number 98342

B. Third Party Claims Settled and Land Acquisitions Made by IID Where No Lawsuit Had Been Filed

Sellers or Claimants were located in the following areas:

- A. Corvina Estates Tenants at Salton Sea Beach [five (5) persons]
- B. North Shore Purchases [two (2)]

- C. Bob's Playa Riviera - East Shore Salton Sea [eight (8) persons]
- D. Salton Sea Beach - Miscellaneous Purchases [thirteen (13)]
- E. Marina Mobile Estates Tenants [ninety (90) persons]
- F. Bombay Beach Marina [one (1) person]
- G. Griset [one (1) person]. Five hundred twenty one (521) acres were purchased. Three hundred forty one (341) acres are landward of dikes. CVWD will share in the cost of one hundred eighty (180) acres seaward of the dikes and receive a flowage easement over those seaward lands
- H. Applet (Salton Sea Yacht Club) [one (1) person]
- I. Adamson/Adhor Farms (Duck Club) [one (1) person]
- J. RLC Duck Club [one (1) person]
- K. Pryor Duck Club [one (1) person]
- L. Wright [one (1) person]
- M. Crawford [one (1) person]
- N. Miscellaneous payments for relocation assistance, etc. [forty-seven (47) persons]

Exhibit C

EXHIBIT C

The transfer of a permanent flowage easement to "fee title" lands (sections 3(a) and 3(b)) shall be by a grant deed and to "easements" (sections 3(c) and 3(d)) shall be by a quitclaim deed. The term permanent flowage easement means:

The perpetual right by grantee to use the described lands in the Salton Sink within and below the minus 220-foot contour as a drainage reservoir to receive and store water from its water and drainage systems, including flood water, return flows from irrigation, tail water, leach water, operational spills and any other water which overflows and floods such lands, originating from lands within the district.

The rights granted herein may be exercised without notice to Grantor or any third party.

The Salton Sink receives water from natural flow (precipitation, runoff and floods) and from irrigation and drainage systems in Imperial and Coachella Valleys in California and Mexicali Valley in the Republic of Mexico creating what is commonly known - the Salton Sea.

The levels of the sea fluctuate depending upon the relationship between inflow and evaporation - there being no outlet from the sea. The hereinafter described lands constitute nearly one-half of the lands, below the minus 220-foot contour and adjacent to and underlying said Salton Sea.

Grantor agrees that it will not make nor permit others to make any use of the land over which the permanent flowage easement extends which is detrimental to or inconsistent with said easement.

This permanent flowage easement shall extend to and be binding upon the grantees and their successors and assigns.

EXHIBIT C

Exhibit D

EXHIBIT D-1
(IID IMPERIAL COUNTY)

	APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
1	001-113-10-01	LOT 17, BLOCK 2	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
2	001-113-13-01	LOT 20, BLOCK 2	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
3	001-115-10-01	LOT 23, BLOCK 4	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
4	001-115-11-01	LOT 22, BLOCK 4	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B-TR. 662	Grant Deed
5	001-115-12-01	LOT 21, BLOCK 4	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
6	001-142-03-01	LOT 18, BLOCK 4	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
7	001-142-04-01	LOT 17, BLOCK 4	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
8	001-170-11-01	LOT 10, BLOCK 5	9	9	9		7/15/1998	98015833	1938	643	DESERT SHORES UNIT NO.2B -TRACT 662	Grant Deed
9	001-170-17-01	LOT 16, BLOCK 5	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
10	001-170-18-01	LOT 17, BLOCK 5	9	9	9		1/28/1998	98001830	1918	1777	DESERT SHORES UNIT 2B -TRACT 662	Grant Deed
11	001-170-46-01	LOT 4, BLOCK 6	9	9	9		9/8/1998	98020799	1945	646	TRACT 662	Grant Deed
12	001-180-03-01	ALL	1	9	9	640.38	3/7/1938	21	482	422		Deed
13	001-180-05-01	ALL	7	9	10	641.04	3/7/1938	21	482	422		Deed
14	001-180-07-01	ALL	11	9	9	640	3/7/1938	21	482	422		Deed
15	001-180-11-01	PORTION OF PARCEL 2 OF ROS (4-8), LYING IN SECTION 15	15	9	9	147.5	9/19/1996	96022055	1862	210		Corporation Grant Deed
16	001-180-15-01	ALL	13	9	9	640	3/7/1938	21	482	422		Deed
17	001-180-17-01	ALL	17	9	10	640	3/7/1938	21	482	422		Deed
18	001-280-04-01	ALL	19	9	10	642.02	3/7/1938	21	482	422		Deed
19	001-280-06-01	ALL	21	9	10	640	3/7/1938	21	482	422		Deed
20	001-280-08-01	ALL	29	9	10	640	3/7/1938	21	482	422		Deed
21	001-280-10-01	N 1/2; N 1/2 OF SE 1/4	25	9	9	400	3/7/1938	21	482	422		Deed
22	001-280-11-01	S 1/2 OF SE 1/4	25	9	9	80	12/10/1996	96028153	1870	1122		Grant Deed
23	001-280-18-01	NE 1/4; NE 1/4 OF NW 1/4; NE 1/4 OF SE 1/4	31	9	10	240	3/7/1938	21	482	422		Deed
24	001-280-21-01	ALL	33	9	10	640	3/7/1938	21	482	422		Deed
25	001-290-03-01	N 7-1/2 ACRES OF N 15 ACRES OF S 30 ACRES OF N 60 ACRES OF NW 1/4	23	9	9	7.5	5/24/1999	99011542	1976	1222		Grant Deed

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(IID IMPERIAL COUNTY)

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE	
26	001-290-05-01	N 75 FEET OF S 15 ACRES OF N 60 ACRES OF NW 1/4	23	9	9	4.55	8/9/1999	99017557	1985	1461		Quitclaim Deed
27	001-290-06-01	S 15 ACRES OF N 60 ACRES OF NW 1/4	23	9	9	10.45	5/24/1999	99011542	1976	1222		Grant Deed
28	001-290-07-01	W 5 ACRES OF S 10 ACRES OF NW 1/4 OF NW 1/4	23	9	9	5	5/24/1999	99011542	1976	1222		Grant Deed
29	001-290-10-01	W 186 FEET OF S 82.5 FEET OF NE 1/4 OF NW 1/4, EXCEPTING THE W 108 FT	23	9	9	0.35	1/28/1998	98001829	1918	1772		Grant Deed
30	001-290-13-01	SW 1/4 OF NW 1/4 OF NE 1/4, EXCEPT S 132 FEET THEREOF	23	9	9	8	1/28/1998	98001829	1918	1772	SALTON SEA	Grant Deed
31	001-290-17-01	PART OF SE 1/4 OF NW 1/4, LYING N & E OF SALTON SEA BEACH ESTATES UNIT NO. 4, TRACT 538 (2-31), EXCEPTING THE S 240 FT OF E 200 FT CONVEYED TO BOMAR BY DEED REC. 3-12-52 (834/151)	23	9	9	22.04	6/30/1997	97014840	1895	1615		Grant Deed
32	001-290-24-01	N 247-1/2 FEET OF S 330 FEET OF NE 1/4 OF NW 1/4, EXCEPTING THE W 30 FT FOR ROAD PURPOSES	23	9	9	7.5	1/28/1998	98001829	1918	1772	SALTON SEA BEACH	Grant Deed
33	001-290-37-01	S 7-1/2 ACRES OF N 30 ACRES OF NW 1/4	23	9	9	7.5	5/24/1999	99011542	1976	1222	SALTON SEA BEACH	Grant Deed
34	001-290-38-01	S 7-1/2 ACRES OF N 15 ACRES OF S 30 ACRES OF N 60 ACRES OF NW 1/4	23	9	9	7.5	5/24/1999	99011542	1976	1222	SALTON SEA BEACH	Grant Deed
35	001-290-39-01	SLY 7.5 ACRES OF N 22.5 ACRES, BEING LAND APPROXIMATELY 123-3/4 FT AT THE MOST WLY LINE OF PROPERTY AND EXTENDING FROM SECTION LINE APPROXIMATELY 1100 FT TO THE SHORES OF THE SALTON SEA, EXCEPTING THE W 500 FT THEREOF	23	9	9	5.85	11/7/1985	27	1549	1487		Individual Grant Deed
36	001-290-40-01	W 500 FT OF THE SLY 7.5 ACRES OF N 22.5 ACRES, BEING LAND APPROXIMATELY 123-3/4 FT AT THE MOST WLY LINE OF PROPERTY AND EXTENDING FROM SECTION LINE APPROXIMATELY 1100 FT TO THE SHORES OF THE SALTON SEA	23	9	9	1.65	11/7/1985	27	1549	1487		Individual Grant Deed
37	001-290-41-01	S 82.50 FEET OF NE 1/4 OF NW 1/4	23	9	9	2	5/24/1999	99011542	1976	1222	SALTON SEA BEACH	Grant Deed
38	001-290-42-01	S 132 FEET OF SW 1/4 OF NW 1/4 OF NE 1/4	23	9	9	2	5/24/1999	99011542	1976	1222	SALTON SEA BEACH	Grant Deed
39	001-311-01-01	LOT 1, BLOCK 10	23	9	9		10/1/1998	98023240	1948	993		Quitclaim Deed
40	001-311-02-01	LOT 2, BLOCK 10	23	9	9		5/24/1999	99011542	1976	1222	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
41	001-311-03-01	LOT 3, BLOCK 10	23	9	9		5/24/1999	99011542	1976	1222	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
42	001-311-27-01	LOT 27, BLOCK 10	23	9	9		7/2/1987	8710378	1583	1388	SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
43	001-311-29-01	LOT 29, BLOCK 10	23	9	9		11/1/2002	28184	2157	90	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
44	001-311-30-01 LOT 30, BLOCK 10	23	9	9		11/7/1985	25	1549	1483	SALTON SEA BEACH ESTATES	Individual Grant Deed
45	001-311-31-01 LOT 31, BLOCK 10	23	9	9		11/1/1992	28185	2157	92	SALTON SEA BEACH ESTATES	Grant Deed
46	001-311-33-01 LOT 28, BLOCK 10, EXCEPT THE N 30 FT THEREOF	23	9	9		7/2/1987	87-10378	1583	1388	SALTON SEA BEACH ESTATES UNIT #4	Individual Grant Deed
47	001-312-24-01 LOT 24, BLOCK 1	23	9	9		6/24/2001	01-12074	2063	669	SALTON SEA BEACH ESTATES	Grant Deed
48	001-312-25-01 LOT 25, BLOCK 1	23	9	9		11/1/2002	02-28185	2157	92	SALTON SEA BEACH ESTATES	Grant Deed
49	001-313-32-01 LOT 32, BLOCK 1A	23	9	9		8/14/1996	96019298	1858	915	SALTON SEA BEACH ESTATES UNIT NO.2	Grant Deed
50	001-320-05-01 LOT 5, BLOCK 9	23	9	9		6/30/1997	9701484	1895	1615	SALTON SEA BEACH ESTAES UNIT NO. 4	Grant Deed
51	001-320-06-01 LOT 6, BLOCK 9	23	9	9		6/30/1987	9701484	1895	1615	SALTON SEA BEACH ESTATES UNIT NO.4	Grant Deed
52	001-320-07-01 LOT 7, BLOCK 9	23	9	9		6/30/1987	9701484	1895	1615	SALTON SEA BEACH ESTATES UNIT NO.4	Grant Deed
53	001-320-08-01 LOT 8, BLOCK 9	23	9	9		6/30/1987	9701484	1895	1615	SALTON SEA BEACH ESTATES UNIT NO.4	Grant Deed
54	001-320-11-01 LOT 11, BLOCK 9	23	9	9		5/21/2003	2003-14778	2203	835	SALTON SEA BEACH ESTATES UNIT NO.4	Grant Deed
55	001-341-03-01 LOT 15, BLOCK 9	23	9	9		3/20/2001	01-05873	2050	1191	SALTON SEA BEACH ESTATES UNIT NO. 4	Grant Deed
56	001-341-04-01 LOT 16, BLOCK 9	23	9	9		6/30/1997	9701484	1895	1615	538, SALTON SEA BEACH ESTATES UNIT NO. 4	Grant Deed
57	001-342-04-01 LOT 18, BLOCK 7	23	9	9		11/27/2000	00-23899	2035	1787	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Quitclaim Deed
58	001-342-05-01 LOT 19, BLOCK 7	23	9	9		5/24/1999	99011542	1976	1222	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
59	001-342-07-01 LOT 21, BLOCK 7	23	9	9		6/20/1995	95013124	1811	1063	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
60	001-342-08-01 LOT 22, BLOCK 7	23	9	9		5/24/1999	99011542	1976	1222	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
61	001-342-09-01 LOT 23, BLOCK 7	23	9	9		5/24/1999	99011542	1976	1222	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
62	001-342-10-01 LOT 24, BLOCK 7	23	9	9		9/22/1997	97021609	1905	738	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed

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(IID IMPERIAL COUNTY)

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
63 001-342-11-01	LOT 25, BLOCK 7	23	9	9		3/21/1997	97007449	1884	423	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
64 001-342-12-01	LOT 26, BLOCK 7	23	9	9		8/5/1997	97017740	1900	101	SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
65 001-342-16-01	LOT 3, BLOCK 7	23	9	9		1/9/1995	95000446	1795	210	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Personal Representative's Deed
66 001-342-17-01	LOT 4, BLOCK 7	23	9	9		6/2/1987	87-10376	1583	1384	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
67 001-342-18-01	LOT 5, BLOCK 7	23	9	9		6/2/1987	87-10376	1583	1384	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
68 001-342-19-01	LOT 6, BLOCK 7	23	9	9		5/24/1999	99011542	1976	1222	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
69 001-343-11-01	LOT 21, BLOCK 4	23	9	9		4/22/1998	98008889	1928	1074	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
70 001-343-12-01	LOT 22, BLOCK 4	23	9	9		4/22/1998	98008889	1928	1074	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
71 001-343-13-01	LOT 1, BLOCK 4	23	9	9		4/22/1998	98008889	1928	1074	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
72 001-343-14-01	LOT 2, BLOCK 4	23	9	9		4/22/1998	98008889	1928	1074	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
73 001-343-22-01	LOT 10, BLOCK 4	23	9	9		1/28/1998	98001829	1918	1772	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
74 001-343-23-01	LOT 11, BLOCK 4	23	9	9		1/28/1998	98001829	1918	1772	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
75 001-343-24-01	PART OF SW 1/4, SECTION 23, 9-9, D.A.F.: BEG AT THE NE COR OF THE NW 1/4 OF THE SW 1/4 OF SAIDD SECTION 23; TH E ALG N LINE OF SD SW 1/4, 150 FT; TH S PARALLEL WITH THE E LINE OF THE NW 1/4 OF THE SW 1/4 OF SD SEC 23, A DISTANCE OF 240 FT TO THE N LINE OF THE COUNTY ROAD LEADING FROM HWY 99 TO SALTON SEA BEACH SUBDIVISION, ACCORDING TO MAP NO. 298; TH W ALG THE N LINE OF SD COUNTY ROAD, 150 FT TO THE E LINE OF THE NW 1/4 OF THE SW 1/4 OF SAID SECTION 23, TH N ALG THE E LINE OF THE NW 1/4 OF THE SW 1/4 OF SD SECTION 23 TO THE P.O.B., EXCEPTING THEREFROM THE N 130 FT THEREOF	23	9	9	0.3	1/28/1998	98001829	1918	1772		Grant Deed

EXHIBIT D-1
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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
76 001-344-03-01	LOT 6, BLOCK 8	23	9	9		2/17/1984	176	1517	202	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Tax Deed To Purchaser of Real Property
77 001-344-04-01	E 200 FEET OF THE S 240 FEET OF THE SE 1/4 OF THE NW 1/4	23	9	9	1.1	8/25/1995	95018633	1818	1397	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
78 001-345-04-01	LOT 9, BLOCK 3	23	9	9		11/1/2002	2002-28185	2157	92	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
79 001-345-08-01	LOT 3, BLOCK 3	23	9	9		8/12/1994	94019031	1779	996	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
80 001-351-02-01	LOTS 1 THRU 20 INCLUSIVE & LOTS 22 THRU 28 INCLUSIVE, BLOCK 11	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
81 001-352-16-01	ALL OF BLOCK 1 (LOTS 1-15)	23	9	9		6/30/1997	97014840	1895	1615	SALTON SEA BEACH	Grant Deed
82 001-353-09-01	LOTS 1, 2, 3, & 15 THRU 21 INCLUSIVE, BLOCK 2	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
83 001-353-11-01	LOTS 12 & 13, BLOCK 2	23	9	9		8/25/95	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
84 001-354-01-01	LOTS 14 & 15, BLOCK 3	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
85 001-354-06-01	LOTS 1 THRU 9, & 21 THRU 29, BLOCK 3	23	9	9		8/25/1995	95018633	1818	1379	SALTON SEA BEACH	Grant Deed
86 001-354-15-01	LOTS 10 THRU 13, BLOCK 3	23	9	9		8/25/1995	95018633	1818	1379	SALTON SEA BEACH	Grant Deed
87 001-354-19-01	LOT 17, BLOCK 3	23	9	9		8/25/1995	95018633	1818	1379	SALTON SEA BEACH	Grant Deed
88 001-355-10-01	LOT 6, BLOCK 4	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
89 001-355-11-01	LOT 5, BLOCK 4	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
90 001-355-12-01	LOT 4, BLOCK 4	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
91 001-355-13-01	LOT 3, BLOCK 4	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
92 001-355-14-01	LOT 2, BLOCK 4	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
93 001-355-15-01	LOT 1, BLOCK 4	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
94 001-355-16-01	LOTS 22 THRU 30, BLOCK 4	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
95 001-355-23-01	LOTS 7 THRU 17, BLOCK 4	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
96 001-355-25-01	LOTS 20 & 21, BLOCK 4	23	9	9		10/13/1995	95022624	1824	592	SALTON SEA BEACH	Grant Deed
97 001-355-26-01	LOTS 18 & 19, BLOCK 4	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
98 001-356-01-01	LOTS 11 THRU 21, BLOCK 5	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
99 001-356-02-01	LOT 10, BLOCK 5	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
100 001-356-03-01	LOT 9, BLOCK 5	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
101 001-356-04-01	LOT 8, BLOCK 5	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
102 001-356-05-01	LOT 7, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
103 001-356-06-01	LOT 6, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
104 001-356-07-01	LOT 5, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
105 001-356-08-01	LOT 4, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
106	001-356-09-01 LOT 3, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
107	001-356-10-01 LOT 2, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
108	001-356-11-01 LOT 1, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
109	001-356-12-01 LOT 30, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
110	001-356-13-01 LOT 29, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
111	001-356-14-01 LOT 28, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
112	001-356-15-01 LOT 27, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
113	001-356-16-01 LOT 26, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
114	001-356-17-01 LOT 25, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
115	001-356-18-01 LOT 24, BLOCK 5	23	9	9		11/22/2000	00-23604	2035	1169	SALTON SEA BEACH	Grant Deed
116	001-356-19-01 LOT 23, BLOCK 5	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
117	001-356-20-01 LOT 22, BLOCK 5	23	9	9		8/25/1985	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
118	001-361-14-01 LOT 30, BLOCK 12	23	9	9		2/20/1987	87-02529	1575	600	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
119	001-361-17-01 LOTS 14 THRU 22, BLOCK 12	23	9	9		2/20/1987	87-02527	1575	596	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
120	001-361-19-01 LOTS 24, 25, & 26, BLOCK 12	23	9	9		2/20/1987	87-02528	1575	598	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
121	001-362-07-01 LOT 11, BLOCK 13	23	9	9		2/20/1987	87-02531	1575	604	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
122	001-362-18-01 LOTS 12 THRU 17, BLOCK 13	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
123	001-362-20-01 LOT 1, BLOCK 13	23	9	9		2/20/1987	87-02530	1575	602	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
124	001-362-25-01 LOTS 9 & 10, BLOCK 13	23	9	9		2/26/1988	88-03101	1598	1134	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
125	001-363-01-01 LOTS 1, 2, 3, 15, 16, 19 THRU 34, BLOCK 14	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed

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126	001-363-03-01	LOT 17, BLOCK 14	23	9	9		2/20/1987	87-02532	1575	606	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
127	001-363-16-01	LOTS 4, 5, 6, BLOCK 14	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
128	001-372-27-01	LOT 30, BLOCK 1	23	9	9		11/1/2002	2002-28185	2157	92	TRACT 538-A, SALTON SEA BEACH ESTATES UNIT NO. 4	Grant Deed
129	001-381-01-01	LOT 30, BLOCK 6	23	9	9		11/22/2000	00-03604	2035	1169	SALTON SEA BEACH	Grant Deed
130	001-381-05-01	LOT 26, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
131	001-381-06-01	LOT 25, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
132	001-381-07-01	LOT 24, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
133	001-381-08-01	LOT 23, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
134	001-381-09-01	LOT 22, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
135	001-381-10-01	LOT 21, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
136	001-381-11-01	LOT 20, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
137	001-381-12-01	LOT 19, BLOCK 6	23	9	9		4/11/1989	89-05691	1622	1496	SALTON SEA BEACH	Grant Deed
138	001-381-13-01	LOT 18, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
139	001-381-15-01	LOT 16, BLOCK 6	23	9	9		2/17/1984	177	1517	204	SALTON SEA BEACH	Tax Deed To Purchaser of Real Property
140	001-381-16-01	LOT 15, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
141	001-381-17-01	LOT 14, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
142	001-381-18-01	LOT 13, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
143	001-381-19-01	LOT 12, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
144	001-381-20-01	LOT 11, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
145	001-381-21-01	LOT 10, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
146	001-381-22-01	LOT 9, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
147	001-381-23-01	LOT 8, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
148	001-381-24-01	LOT 7, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
149	001-381-25-01	LOT 6, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
150	001-381-26-01	LOT 5, BLOCK 6	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
151	001-382-01-01	LOT 30, BLOCK 6	23	9	9		11/7/1985	27	1549	1487	SALTON SEA BEACH	Grant Deed
152	001-382-02-01	LOT 29, BLOCK 6	23	9	9		11/7/1985	27	1549	1487	SALTON SEA BEACH	Grant Deed
153	001-382-03-01	LOT 28, BLOCK 7	23	9	9		11/7/1985	27	1549	1487	SALTON SEA BEACH	Grant Deed
154	001-382-04-01	LOT 27, BLOCK 7	23	9	9		11/7/1985	27	1549	1487	SALTON SEA BEACH	Grant Deed
155	001-382-05-01	LOT 26, BLOCK 7	23	9	9		11/7/1985	27	1549	1487	SALTON SEA BEACH	Grant Deed
156	001-382-06-01	LOT 25, BLOCK 7	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed

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157	001-382-07-01 LOT 24, BLOCK 7	23	9	9		6/5/1996	96012112	1849	1077	SALTON SEA BEACH	Grant Deed
158	001-382-08-01 LOT 23, BLOCK 7	23	9	9		6/5/1996	96012112	1849	1077	SALTON SEA BEACH	Grant Deed
159	001-382-09-01 LOT 22, BLOCK 7	23	9	9		6/5/1996	96012112	1849	1077	SALTON SEA BEACH	Grant Deed
160	001-382-10-01 LOT 21, BLOCK 7	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
161	001-382-11-01 LOT 20, BLOCK 7	23	9	9		8/12/1994	94019023 / 4	1779	929 & 932	SALTON SEA BEACH	Grant Deed
162	001-382-12-01 LOT 19, BLOCK 7	23	9	9		8/12/1994	94019023 / 4	1779	929 & 932	SALTON SEA BEACH	Grant Deed
163	001-382-14-01 LOT 17, BLOCK 7	23	9	9		8/12/1994	94019023 / 4	1779	929 & 932	SALTON SEA BEACH	Grant Deed
164	001-382-15-01 LOT 16, BLOCK 7	23	9	9		8/12/1994	94019023 / 4	1779	929 & 932	SALTON SEA BEACH	Grant Deed
165	001-382-33-01 LOTS 6, 7 & 8, BLOCK 7	23	9	9		11/7/1985	28	1549	1489	SALTON SEA BEACH	Grant Deed
166	001-382-34-01 LOTS 9, 10, 11 & 12, BLOCK 7	23	9	9		11/7/1985	28	1549	1489	SALTON SEA BEACH	Grant Deed
167	001-382-35-01 LOTS 4 & 5, BLOCK 7	23	9	9		11/7/1985	28	1549	1489	SALTON SEA BEACH	Grant Deed
168	001-382-36-01 LOTS 1, 2 & 3, BLOCK 7	23	9	9		11/7/1985	28	1549	1489	SALTON SEA BEACH	Grant Deed
169	001-383-28-01 LOT 3, BLOCK 8	23	9	9		10/4/1991	91018923	1683	632	SALTON SEA BEACH	Grant Deed
170	001-383-31-01 EAST 1/2 OF LOT 7, ALL OF LOT 8, BLOCK 8	23	9	9		12/23/1985	29	1551	1774	SALTON SEA BEACH	Grant Deed
171	001-383-36-01 LOT 27, BLOCK 8	23	9	9		7/2/1987	87-010375	1583	1382	SALTON SEA BEACH	Grant Deed
172	001-384-30-01 LOTS 1 THRU 8, BLOCK 15	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
173	001-384-31-01 LOTS 22 THRU 30, BLOCK 15	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
174	001-384-33-01 LOTS 16 THRU 21, BLOCK 15	23	9	9		6/5/1996	96012112	1849	1077	SALTON SEA BEACH	Grant Deed
175	001-384-34-01 LOTS 9 THRU 15, BLOCK 15	23	9	9		6/5/1996	96012112	1849	1077	SALTON SEA BEACH	Grant Deed
176	001-385-24-01 LOT 15, BLOCK 16	23	9	9		2/20/1987	87-002533	1575	608	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
177	001-386-02-01 LOT 26, BLOCK 17	23	9	9		8/11/1994	94018915	1779	637	SALTON SEA BEACH	Grant Deed
178	001-386-14-01 LOTS 29 & 30, BLOCK 17	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
179	001-386-16-01 LOTS 11, 12, 13, 14 & 15, BLOCK 17	23	9	9		2/20/1987	87-002531	1575	610	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
180	001-391-20-01 LOT 11, BLOCK 9	23	9	9		8/11/1994	94018913	1779	629	SALTON SEA BEACH	Grant Deed
181	001-391-21-01 LOT 10, BLOCK 9	23	9	9		8/11/1994	94018913	1779	629	SALTON SEA BEACH	Grant Deed
182	001-391-22-01 LOT 9, BLOCK 9	23	9	9		8/11/1994	94018913	1779	629	SALTON SEA BEACH	Grant Deed
183	001-392-01-01 LOT 30, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
184	001-392-02-01 LOT 29, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
185	001-392-03-01 LOT 28, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
186	001-392-04-01 LOT 27, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed

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187	001-392-05-01 LOT 26, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
188	001-392-06-01 LOT 25, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
189	001-392-07-01 LOT 24, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
190	001-392-08-01 LOT 23, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
191	001-392-09-01 LOT 22, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
192	001-392-10-01 LOT 21, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
193	001-392-11-01 LOT 20, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
194	001-392-12-01 LOT 19, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
195	001-392-13-01 LOT 18, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
196	001-392-14-01 LOT 17, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
197	001-392-15-01 LOT 16, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
198	001-392-16-01 LOT 15, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
199	001-392-17-01 LOT 14, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
200	001-392-18-01 LOT 13, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
201	001-392-19-01 LOT 12, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
202	001-392-20-01 LOT 11, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
203	001-392-21-01 LOT 10, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
204	001-392-22-01 LOT 9, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
205	001-392-23-01 LOT 8, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
206	001-392-24-01 LOTS 4, 5, 6 & 7, BLOCK 10	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
207	001-392-25-01 LOT 3, BLOCK 10	23	9	9		8/25/1995	95108633	1818	1397	SALTON SEA BEACH	Grant Deed
208	001-392-26-01 LOT 2, BLOCK 10	23	9	9		8/25/1995	95108633	1818	1397	SALTON SEA BEACH	Grant Deed
209	001-392-27-01 LOT 1, BLOCK 10	23	9	9		8/25/1995	95108633	1818	1397	SALTON SEA BEACH	Grant Deed
210	001-393-02-01 LOTS 1 THRU 28, BLOCK 18	23	9	9		8/25/1995	95108633	1818	1397	SALTON SEA BEACH	Grant Deed
211	001-394-01-01 LOT 30, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
212	001-394-02-01 LOT 29, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
213	001-394-03-01 LOT 28, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
214	001-394-04-01 LOT 27, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
215	001-394-05-01 LOT 26, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
216	001-394-06-01 LOT 25, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
217	001-394-08-01 LOTS 8 THRU 23, BLOCK 19	23	9	9		8/12/1994	94019023 / 4	1779	929 & 932	SALTON SEA BEACH	Grant Deed
218	001-394-10-01 LOT 6, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
219	001-394-11-01 LOT 5, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
220	001-394-12-01 LOT 4, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
221	001-394-13-01 LOT 3, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed

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222	001-394-14-01 LOT 2, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
223	001-394-15-01 LOT 1, BLOCK 19	23	9	9		8/25/1995	95018633	1818	1397	SALTON SEA BEACH	Grant Deed
224	001-401-02-01 LOT 7, BLOCK 20	23	9	9		2/26/1988	88-03100	1598	1132	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
225	001-401-05-01 LOT 2, BLOCK 20	23	9	9		4/13/1989	89-05819	1622	1731	SALTON SEA BEACH	Grant Deed
226	001-402-10-01 LOTS 3, 4, 5, 6 & 15 & 17, BLOCK 21	23	9	9		2/20/1987	87-02535	1575	612	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
227	001-402-13-01 LOT 10, BLOCK 21	23	9	9		4/2/1987	87-05053	1578	244	SALTON SEA BEACH SUBDIVISION	Grant Deed
228	001-403-03-01 LOT 25, BLOCK 22	23	9	9		2/26/1988	88-03099	1598	1130	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
229	001-403-06-01 LOTS 1 THRU 10 & 13, 14, 15 & 18 THRU 24 & 26, 27, 28, 29, BLOCK 22	23	9	9		2/20/1987	87-02536	1575	614	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
230	001-404-07-01 LOTS 1 THRU 5 INCLUSIVE, & LOTS 27 THRU 31 INCLUSIVE, BLOCK 25	23	9	9		5/17/1991	91008690	1672	1599	SALTON SEA BEACH	Individual Grant Deed
231	001-404-09-01 LOTS 6 THRU 13 & 22 THRU 26, BLOCK 25	23	9	9		4/13/1989	89-05819	1622	1731	SALTON SEA BEACH	Grant Deed
232	001-411-03-01 LOTS 1, 2, 3 & 5 TO 13 & 15 TO 30, BLOCK 23	23	9	9		2/20/1987	87-02537	1575	616	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
233	001-412-08-01 LOTS 10 TO 21 INCLUSIVE, BLOCK 24	23	9	9		2/20/1987	87-02538	1575	618	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
234	001-413-08-01 LOTS 1 THRU 10 & LOTS 12, 13, 14, 17 & 19, BLOCK 27	23	9	9		4/11/1989	89-05691	1622	1495	SALTON SEA BEACH	Individual Grant Deed
235	001-414-08-01 LOTS 7 THRU 14 & LOTS 20 THRU 30, BLOCK 28	23	9	9		4/11/1989	89-05691	1622	1495	SALTON SEA BEACH	Individual Grant Deed
236	001-414-12-01 LOTS 18 & 19, BLOCK 28	23	9	9		4/13/1989	89-05819	1622	1731	SALTON SEA BEACH	Individual Grant Deed
237	001-460-03-01 S 1/2	23	9	9	320	3/7/1938	21	482	422	SALTON SEA	Deed
238	001-470-02-01 ALL	23	9	10	640	3/7/1938	21	482	422	SALTON SEA	Deed
239	001-470-04-01 ALL	25	9	10	640	3/7/1938	21	482	422	SALTON SEA	Deed
240	001-470-06-01 ALL	27	9	10	640	3/7/1938	21	482	422	SALTON SEA	Deed
241	001-470-08-01 W 1/2	35	9	10	320	3/7/1938	21	482	422	SALTON SEA	Deed
242	001-470-09-01 E 1/2	35	9	10	320	3/7/1938	21	482	422	SALTON SEA	Deed

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243 001-480-29-01	NORTHERLY 608.25 FEET THEREOF ALONG THE EASTERLY LINE OF LOT 3, TRACT 700 (8-49), EXCEPTING THEREFROM THAT PORTION LYING EAST OF A LINE DAF: COMMENCING AT THE MOST NORTHERLY NORTHWEST CORNER OF SAID LOT 3; THENCE NORTH 88°35'00" E, 1413.95 FEET TO THE POB OF THE LINE HEREIN DESCRIBED; THENCE S 01°24'57" E, 2097.78 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 3 AND THE POINT OF TERMINATION OF SAID LINE	9	9	9	20	3/31/1995	95006961	1803	742	TRACT 700	Grant Deed
244 001-480-31-01	THEROF, LYING EAST OF A LINE DAF: COMMENCING AT THE MOST NORTHERLY NORTHWEST CORNER OF SAID LOT 3; THENCE NORTH 88°35'00" E, 1413.95 FEET TO THE POB OF THE LINE HEREIN DESCRIBED; THENCE S 01°24'57" E, 2097.78 FEET TO A POINT ON THE SOUTH LINE OF SAID LOT 3 AND THE POINT OF TERMINATION OF SAID LINE	9	9	9	38.82	3/31/1995	95006961	1803	742	TRACT 700	Grant Deed
245 001-850-47-01	THAT PORTION OF THE NE 1/4 OF THE NW 1/4	23	9	9	8.6	9/24/1998	980022453	1947	662	TRACT 724	Grant Deed
246 002-020-04-01	THE S 30 ACRES OF THE N 60 ACRES OF THE S 80 ACRES OF THE N 1/2 OF THE N 1/2 OF SAID SECTION 4	4	9	11	10.78	7/27/1995	95016371	1815	1217		Grant Deed
247 002-020-14-01	PART OF THE S 1/2 OF N 1/2, SECTION 4, 9-11, LYING E OF STATE HWY AND LYING S AND PARALLEL WITH AND 1,155 FT S OF THE N LINE OF SD S 1/2 OF N 1/2 OF SD SECTION	4	9	11	2.49	1/14/1997	97000976	1874	883		Grant Deed
248 002-020-25-01	PART OF S 1/2 OF N 1/2, SECTION 4, 9-11, LYING W OF STATE HWY AND LYING S AND PARALLEL WITH AND 1,155 FT S OF THE N LINE OF SD S 1/2 OF N 1/2 OF SD SECTION	4	9	11	16.62	1/14/1997	97000976	1874	883		Grant Deed
249 002-020-35-01	THE S 30 ACRES OF THE N 60 ACRES OF THE S 80 ACRES OF THE N 1/2 OF THE N 1/2 OF SAID SECTION 4	4	9	11	17.5	7/27/1995	95016371	1815	1217		Grant Deed
250 002-020-45-01	PART OF S 166 FT OF N 824 FT OF S 1/2 OF N 1/2 AND PART OF S 166 FT OF N 990 FT OF S 1/2 OF N 1/2, SECTION 4, 9-11, LY W OF STATE HWY 111	4	9	11	30.77	4/30/1996	96009254	1845	1068		Grant Deed
251 002-020-46-01	PART OF S 166 FT OF N 824 FT OF S 1/2 OF N 1/2, AND PART OF S 166 FT OF N 990 FT OF S 1/2 OF N 1/2, SECTION 4, 9-11, LY E OF STATE HWY 111	4	9	11	7.48	4/30/1996	96009254	1845	1068		Grant Deed
252 002-120-25-01	THE EAST 1/2 OF THE NW 1/4 OF THE NE 1/4	15	9	12	20	6/24/1988	88-10085	1605	1651		Individual Grant Deed
253 002-160-03-01	ALL	21	9	11	640	3/7/1938	21	482	422		Deed
254 002-160-05-01	NW 1/4 OF NE 1/4; S 1/2 OF NE 1/4; NW 1/4; S 1/2	23	9	11	600	3/7/1938	21	482	422		Deed
255 002-160-12-01	NW 1/4 OF NE 1/4; S 1/2 OF NE 1/4; NW 1/4; S 1/2	25	9	11	600	3/7/1938	21	482	422		Deed
256 002-160-14-01	ALL	27	9	11	640	3/7/1938	21	482	422		Deed

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257	002-160-22-01 ALL	35	9	11	640	3/7/1938	21	482	422	SALTON SEA	Deed
258	002-160-23-01 ALL	36	9	11	640	3/7/1962	50	1104	618		Patent
259	002-244-34-01 LOTS 188, 189 & 190, BLOCK E	33	9	12		3/20/2001	2001-105875	2050	1196	BOMBAY BEACH	Grant Deed
260	002-252-03-01 LOT 118, BLOCK F	33	9	12		3/20/2001	2001-05874	2050	1194	BOMBAY BEACH	Grant Deed
261	002-252-04-01 LOT 117, BLOCK F	33	9	12		4/2/2002	2002-07987	2115	987	BOMBAY BEACH	Grant Deed
262	002-252-05-01 LOT 116, BLOCK F	33	9	12		2/25/2003	2003-005628	2182	705	BOMBAY BEACH	Grant Deed
263	002-252-07-01 LOT 114, BLOCK F	33	9	12		6/24/2003	2003-18064	2211	1452	BOMBAY BEACH	Grant Deed
264	002-252-09-01 LOT 112, BLOCK F	33	9	12		2/25/2003	2003-005628	2182	705	BOMBAY BEACH	Grant Deed
265	002-252-10-01 LOT 111, BLOCK F	33	9	12		3/10/2003	2003-006989	2185	974	BOMBAY BEACH	Grant Deed
266	002-253-01-01 LOT 180, BLOCK F	33	9	12		9/11/2002	2002-23254	2146	875	BOMBAY BEACH	Grant Deed
267	002-253-02-01 LOT 179, BLOCK F	33	9	12		3/21/2001	2001-05987	2050	1545	BOMBAY BEACH	Grant Deed
268	002-253-28-01 LOT 123, BLOCK F	33	9	12		10/10/2002	2002-25900	2512	677	BOMBAY BEACH	Grant Deed
269	002-253-29-01 LOT 122, BLOCK F	33	9	12		5/28/2003	2003-015438	2204	1697	BOMBAY BEACH	Grant Deed
270	002-253-30-01 LOT 121, BLOCK F	33	9	12		9/11/2002	2002-23254	2146	875	BOMBAY BEACH	Grant Deed
271	002-253-33-01 LOTS 124 & 125, BLOCK F	33	9	12		10/8/2001	2001-22490	2084	713	BOMBAY BEACH	Grant Deed
272	002-254-01-01 LOT 240, BLOCK F	33	9	12		11/18/1996	96026666	1868	773	BOMBAY BEACH	Grant Deed
273	002-254-14-01 LOT 227, BLOCK F	33	9	12		12/16/1996	96028520	1871	169	BOMBAY BEACH	Grant Deed
274	002-254-15-01 LOT 226, BLOCK F	33	9	12		12/16/1996	96028520	1871	169	BOMBAY BEACH	Full Reconveyance Grant Deed
275	002-261-33-01 LOTS 16 TO 32 INCLUSIVE, LOTS 39 TO 45 INCLUSIVE, BLOCK E	33	9	12		11/30/1995	95026315	1829	939	BOMBAY BEACH	Grant Deed
276	002-261-34-01 LOT 38, BLOCK 3	33	9	12		11/30/1995	95026315	1829	939	BOMBAY BEACH	Grant Deed
277	002-262-33-01 LOTS 76 TO 105, INCLUSIVE, BLOCK E	33	9	12		11/30/1995	95026315	1829	939	BOMBA6 BEACH	Grant Deed
278	002-263-02-01 LOT 164, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
279	002-263-03-01 LOT 163, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
280	002-263-04-01 LOT 162, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
281	002-263-05-01 LOT 161, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
282	002-263-26-01 LOT 140, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
283	002-263-27-01 LOT 139, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
284	002-263-28-01 LOT 138, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
285	002-263-29-01 LOT 137, BLOCK E	33	9	12		12/29/1994	94031285 / 6	1794	374 & 378	BOMBAY BEACH	Grant Deed/QC Deed
286	002-263-30-01 LOT 136, BLOCK E	33	9	12		9/27/1995	95021259-63	1822	844-856	BOMBAY BEACH	Grant Deed
287	002-264-01-01 LOT 225, BLOCK E	33	9	12		8/11/1994	94018909	1779	608	BOMBAY BEACH	Quitclaim Deed

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288	002-264-02-01	LOT 224, BLOCK E	33	9	12		8/11/1994	94018909	1779	608	BOMBAY BEACH	Quitclaim Deed
289	002-264-04-01	LOT 222, BLOCK E	33	9	12		6/30/1994	94015278 & 80	1774	1341 & 1349	BOMBAY BEACH	Grant Deed
290	002-264-33-01	LOTS 211 THRU 214, BLOCK E	33	9	12		12/23/1985	30	1551	1776	BOMBAY BEACH	Grant Deed
291	002-271-22-01	LOT 24, BLOCK F	33	9	12		8/11/1994	94018916	1779	639	BOMBAY BEACH	Grant Deed
292	002-271-29-01	LOT 17, BLOCK F	33	9	12		7/2/1987	87-10362	1583	1356	BOMBAY BEACH	Grant Deed
293	002-271-30-01	LOT 16, BLOCK F	33	9	12		7/2/1987	87-10362	1583	1356	BOMBAY BEACH	Grant Deed
294	002-271-32-01	LOTS 41, 42 & 43, BLOCK F	33	9	12		8/12/1994	94019027	1779	965	BOMBAY BEACH	Grant Deed
295	002-272-07-01	LOT 99, BLOCK F	33	9	12		8/12/1994	94019016	1779	907	BOMBAY BEACH	Grant Deed
296	002-272-08-01	LOT 98, BLOCK F	33	9	12		8/12/1994	94019016	1779	906	BOMBAY BEACH	Grant Deed
297	002-272-10-01	LOT 96, BLOCK F	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Corporation Grant Deed
298	002-272-11-01	LOT 95, BLOCK F	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Corporation Grant Deed
299	002-272-23-01	LOT 83, BLOCK F	33	9	12		6/30/1994	94015281	1774	1352	BOMBAY BEACH	Grant Deed
300	002-273-01-01	LOT 165, BLOCK F	33	9	12		11/7/1985	24	1549	1481	BOMBAY BEACH	Individual Grant Deed
301	002-273-02-01	LOT 164, BLOCK F	33	9	12		11/7/1985	24	1549	1481	BOMBAY BEACH	Individual Grant Deed
302	002-273-19-01	LOT 147, BLOCK F	33	9	12		11/7/1985	29	1549	1491	BOMBAY BEACH	Individual Grant Deed
303	002-273-20-01	LOT 146, BLOCK F	33	9	12		11/7/1985	29	1549	1491	BOMBAY BEACH	Individual Grant Deed
304	002-273-22-01	LOT 144, BLOCK F	33	9	12		11/7/1985	26	1549	1485	BOMBAY BEACH	Individual Grant Deed
305	002-273-33-01	LOTS 136, 137 & 138, BLOCK F	33	9	12		7/2/1987	81-010359	1583	1350	BOMBAY BEACH	Individual Grant Deed
306	002-274-01-01	LOT 225, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
307	002-274-16-01	LOT 210, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
308	002-274-21-01	LOTS 205, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
309	002-274-24-01	LOT 202, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
310	002-274-25-01	LOT 201, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
311	002-274-26-01	LOT 200 BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
312	002-274-35-01	LOTS 199, 203, 204, 207, 214 THRU 222, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed
313	002-274-36-01	LOTS 196, 197, 198 & 223, BLOCK F	33	9	12		11/7/1985	30	1549	1494	BOMBAY BEACH	Individual Grant Deed

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314 002-282-15-01	LOTS 31 & 31A, BLOCK G	33	9	12		2/20/1987	87-02518	1575	578	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
315 002-282-16-01	LOTS 26 TO 30 INCL, & 46 TO 50 INCL, BLOCK G	33	9	12		2/20/1987	87-02517	1575	576	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
316 002-283-11-01	LOT 15, BLOCK G	33	9	12		2/20/1987	87-02514	1575	570	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
317 002-283-17-01	LOTS 21 TO 25, BLOCK G	33	9	12		2/20/1987	87-02516	1575	574	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
318 002-283-21-01	LOT 19, BLOCK G	33	9	12		2/20/1987	87-02515	1575	572	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
319 002-284-01-01	LOT 32, BLOCK G	33	9	12		4/2/1987	87-05052	1578	242	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
320 002-284-12-01	LOT 43, BLOCK G	33	9	12		2/26/1988	88-03098	1598	1128	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
321 002-284-15-01	LOTS 44 & 45, BLOCK G	33	9	12		2/20/1987	87-02520	1575	582	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
322 002-284-18-01	LOTS 37, 38 & 39 BLOCK G	33	9	12		5/10/1984	11	1521	981	BOMBAY BEACH	Tax Deed To Purchaser of Real Property
323 002-284-22-01	LOT 34, BLOCK G	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Grant Deed
324 002-285-20-01	LOTS 53 & 54, BLOCK G	33	9	12		2/17/1984	180	1517	210	BOMBAY BEACH	Tax Deed To Purchaser of Real Property
325 002-285-21-01	LOTS 66 TO 71 INCLUSIVE, BLOCK G	33	9	12		2/17/1984	181	1517	212	BOMBAY BEACH	Tax Deed To Purchaser of Real Property
326 002-285-29-01	LOT 56, BLOCK G	33	9	12		2/20/1987	87-02519	1575	580	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property

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327	002-286-09-01 LOT 116, BLOCK G	33	9	12		8/12/1994	94019029	1779	979	BOMBAY BEACH	Grant Deed
328	002-286-16-01 LOTS 98, 99, 100 & 117 TO 121 INCLUSIVE, BLOCK G	33	9	12		2/20/1987	87-02523	1575	588	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
329	002-287-06-01 LOT 91, BLOCK G	33	9	12		2/20/1987	87-02522	1575	586	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
330	002-287-28-01 LOTS 75 & 76, BLOCK G	33	9	12		2/20/1987	87-02521	1575	584	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
331	002-288-17-01 LOTS 108 & 109, BLOCK G	33	9	12		8/12/1994	94019026	1779	961	BOMBAY BEACH	Grant Deed
332	002-288-21-01 LOT 103, BLOCK G	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Grant Deed
333	002-288-22-01 LOT 104, BLOCK G	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Grant Deed
334	002-288-23-01 LOTS 112 & 113, BLOCK G	33	9	12		2/20/1987	87-02525	1575	592	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
335	002-288-24-01 LOTS 110 & 111, BLOCK G	33	9	12		2/20/1987	87-02524	1575	590	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
336	002-288-28-01 LOT 18, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed
337	002-292-16-01 LOTS 30, 31, 33 & 34, BLOCK H	33	9	12		10/4/1995	95021992	1823	812	BOMBAY BEACH	Grant Deed
338	002-292-17-01 LOTS 35 THRU 39, BLOCK H	33	9	12		2/20/1987	87-02507	1575	556	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
339	002-292-18-01 LOTS 26, & 27, BLOCK H	33	9	12		2/26/1988	88-03102	1598	1136	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property
340	002-293-03-01 LOT 66, BLOCK H	33	9	12		9/29/1995	95021595	1822	1756	BOMBAY BEACH	Grant Deed
341	002-293-05-01 LOT 64, BLOCK H	33	9	12		4/1/1992	92006629	1695	1711	BOMBAY BEACH	Grant Deed
342	002-293-32-01 LOT 62 & 63, BLOCK H	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Grant Deed
343	002-293-33-01 LOTS 40 THRU 60, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed
344	002-297-08-01 LOT 76, BLOCK H	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Grant Deed
345	002-294-15-01 LOTS 69 THRU 75, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed
346	002-294-16-01 LOTS 78 & 79, BLOCK H	33	9	12		2/20/1987	87-02508	1575	558	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property

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347	002-288-42-01 LOTS 199 THROUGH 122, BLOCK H	33	9	12		2/20/1987	87-02510	1575	562	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
348	002-291-21-01 LOT 5, BLOCK H	33	9	12		2/20/1987	87-02505	1575	552	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
349	002-291-26-01 LOTS 1, 2, & 3, BLOCK H	33	9	12		2/20/1987	87-02504	1575	550	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
350	002-291-27-01 LOTS 23, 24 & 25, BLOCK H	33	9	12		2/20/1987	87-02506	1575	554	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
351	002-291-29-01 LOTS 10 THRU 20, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed	
352	002-301-33-01 LOTS 88 THRU 100, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed	
353	002-301-36-01 LOT 104, BLOCK H	33	9	12		2/20/1987	87-02509	1575	560	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
354	002-302-15-01 LOTS 144-153, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed	
355	002-303-32-01 LOTS 137-141, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed	
356	002-303-33-01 LOTS 124-129 & 132-135, BLOCK H	33	9	12		10/12/1995	95022535	1824	354	BOMBAY BEACH	Grant Deed	
357	002-303-35-01 LOTS 119 TO 122, BLOCK H	33	9	12		2/20/1987	87-02510	1575	562	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
358	002-303-37-01 LOTS 113-117, BLOCK H	33	9	12		10/12/1995	95022535	1824	345	BOMBAY BEACH	Grant Deed	
359	002-304-16-01 LOT 168, BLOCK H	33	9	12		11/4/1997	97024812	1910	231	BOMBAY BEACH	Grant Deed	
360	002-304-20-01 LOTS 159 & 160, BLOCK H	33	9	12		8/12/1994	94019017	1779	911	BOMBAY BEACH	Quitclaim Deed	
361	002-304-21-01 LOTS 161, 162 & 163, BLOCK H	33	9	12		2/20/1987	87-02513	1575	568	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
362	002-304-24-01 LOTS 157 & 158, BLOCK H	33	9	12		2/20/1987	87-02511	1575	564	BOMBAY BEACH	Tax Deed to Purchaser of Tax-Defaulted Property	
363	002-310-02-01 ALL	5	10	11	641.42	3/7/1938	21	482	422		Deed	
364	002-310-04-01 ALL	3	10	11	641.46	3/7/1938	21	482	422		Deed	
365	002-310-06-01 ALL	1	10	11	640.80	3/7/1938	21	482	422		Deed	
366	002-310-08-01 ALL	11	10	11	640	3/7/1938	21	482	422		Deed	

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367	002-310-10-01	ALL	9	10	11	640	3/7/1938	21	482	422	Deed
368	002-310-12-01	ALL	7	10	11	643.58	3/7/1938	21	482	422	Deed
369	002-310-14-01	NW 1/4 & S 1/2	17	10	11	480	3/7/1938	21	482	422	Deed
370	002-310-15-01	NE 1/4	17	10	11	160	3/7/1938	21	482	422	Deed
371	002-310-17-01	ALL	15	10	11	640	3/7/1938	21	482	422	Deed
372	002-310-19-01	ALL	13	10	11	640	3/7/1938	21	482	422	Deed
373	002-320-02-01	ALL	5	10	12	641.86	3/7/1938	21	482	422	Deed
374	002-320-04-01	ALL	3	10	12	641.82	3/7/1938	21	482	422	Deed
375	002-320-06-01	ALL	1	10	12	641.18	3/7/1938	21	482	422	Deed
376	002-320-08-01	ALL	11	10	12	640	3/7/1938	21	482	422	Deed
377	002-320-10-01	ALL	9	10	12	640	3/7/1938	21	482	422	Deed
378	002-320-12-01	ALL	7	10	12	643.06	3/7/1938	21	482	422	Deed
379	002-320-14-01	ALL	17	10	11	640	3/7/1938	21	482	422	Deed
380	002-320-15-01	ALL	16	10	11	640	3/7/1962	50	1104	618	Deed
381	002-320-16-01	ALL	15	10	11	640	3/7/1938	21	482	422	Deed
382	002-320-18-01	N 1/2	13	10	11	320	3/7/1938	21	482	422	Deed
383	002-320-19-01	S 1/2	13	10	11	320	3/7/1938	21	482	422	Deed
384	002-330-05-01	ALL	23	10	11	640	3/7/1938	21	482	422	Deed
385	002-330-07-01	ALL	25	10	11	640	3/7/1938	21	482	422	Deed
386	002-330-09-01	ALL	27	10	11	640	3/7/1938	21	482	422	Deed
387	002-330-11-01	ALL	29	10	11	640	3/7/1938	21	482	422	Deed
388	002-330-16-01	ALL	33	10	11	640	3/7/1938	21	482	422	Deed
389	002-330-18-01	ALL	35	10	11	640	3/7/1938	21	482	422	Deed
390	002-330-20-01	W 1/2	21	10	11	320	3/7/1938	21	482	422	Deed
391	002-330-21-01	E 1/2	21	10	11	320	3/7/1938	21	482	422	Deed
392	002-340-01-01	ALL	19	10	12	643.21	3/7/1938	21	482	422	Deed
393	002-340-03-01	ALL	21	10	12	640	3/7/1938	21	482	422	Deed
394	002-340-05-01	ALL	23	10	12	640	3/7/1938	21	482	422	Deed
395	002-340-07-01	ALL	25	10	12	640	3/7/1938	21	482	422	Deed
396	002-340-09-01	ALL	27	10	12	640	3/7/1938	21	482	422	Deed
397	002-340-11-01	ALL	29	10	12	640	3/7/1938	21	482	422	Deed
398	002-340-13-01	ALL	31	10	12	646.94	3/7/1938	21	482	422	Deed
399	002-340-15-01	ALL	33	10	12	640	3/7/1938	21	482	422	Deed
400	002-340-17-01	ALL	35	10	12	640	3/7/1938	21	482	422	Deed
401	002-350-02-01	ALL	5	11	11	639	3/7/1938	21	482	422	Deed
402	002-350-04-01	ALL	3	11	11	638.24	3/7/1938	21	482	422	Deed

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
403	002-350-06-01	ALL	1	11	11	639.20	3/7/1938	21	482	422	Deed
404	002-350-08-01	ALL	11	11	11	640	3/7/1938	21	482	422	Deed
405	002-350-10-01	ALL	9	11	11	640	3/7/1938	21	482	422	Deed
406	002-350-25-01	ALL	15	11	11	640	3/7/1938	21	482	422	Deed
407	002-350-27-01	ALL	13	11	11	640	3/7/1938	21	482	422	Deed
408	002-350-31-01	N 1/2 OF NE 1/4 & SE 1/4 OF NE 1/4	7	11	11	120	3/7/1938	21	482	422	Deed
409	002-350-34-01	E 1/2 & NE 1/4 OF NW 1/4	17	11	11	360	3/7/1938	21	482	422	Deed
410	002-360-02-01	ALL	5	11	12	642.48	3/7/1938	21	482	422	Deed
411	002-360-04-01	ALL	3	11	12	641.74	3/7/1938	21	482	422	Deed
412	002-360-10-01	ALL	9	11	12	640	3/7/1938	21	482	422	Deed
413	002-360-12-01	ALL	7	11	12	647.82	3/7/1938	21	482	422	Deed
414	002-360-14-01	ALL	17	11	12	640	3/7/1938	21	482	422	Deed
415	002-370-09-01	ALL	27	11	11	640	3/7/1938	21	482	422	Deed
416	002-370-23-01	N 1/2 OF SE 1/4 & NE 1/4 OF SW 1/4 & SE 1/4 OF SE 1/4	33	11	11	160	3/7/1938	21	482	422	Deed
417	002-370-25-01	ALL	35	11	11	640	3/7/1938	21	482	422	Deed
418	002-380-07-01	ALL	25	11	12	640	3/7/1938	21	482	422	Deed
419	002-380-08-01	ALL	25	11	12	640	3/7/1938	21	482	422	Deed
420	002-380-13-01	ALL	31	11	12	651	3/7/1938	21	482	422	Deed
421	002-380-17-01	ALL	35	11	12	640	3/7/1938	21	482	422	Deed
422	002-540-02-01	ALL	5	9	11	640.86	3/7/1938	21	482	422	Deed
423	002-550-03-01	N 1/2 & SE 1/4	7	9	11	480.40	3/7/1938	21	482	422	Deed
424	002-560-01-01	ALL	9	9	11	640	3/7/1938	21	482	422	Deed
425	002-600-01-01	NW 1/4	16	9	11	160	8/11/1994	94018908	1779	606	Grant Deed
426	002-600-02-01	NE 1/4	16	9	11	160	1/12/1965	11	1199	246	Grant Deed
427	002-600-03-01	ALL	15	9	11	640	3/7/1938	21	482	422	Grant Deed
428	002-600-05-01	S 13-1/3 CHAINS OF N 26-2/3 CHAINS OF SE 1/4	16	9	11	53.33	5/24/1965	15	1207	662	Deed
429	002-600-06-01	SE 1/4, EXCEPT THE N 26-2/3 CHAINS	16	9	11	53.32	10/8/1964	17	1193	398	Grant Deed
430	002-600-07-01	S 1/2 OF SW 1/4	16	9	11	80	9/10/1993	93021868	1744	1292	Grant Deed
431	002-600-08-01	N 1/2 OF SW 1/4	16	9	11	80	3/7/1962	50	1104	618	Grant Deed
432	002-610-02-01	ALL	17	9	11	640	3/7/1938	21	482	422	Deed
433	002-630-01-01	ALL	31	9	12	643.32	3/7/1938	21	482	422	Deed
434	002-640-02-01	E 1/2	33	9	12	320	3/7/1938	21	482	422	Deed
435	002-650-01-01	ALL	35	9	12	640	3/7/1938	21	482	422	Deed
436	002-650-02-01	NW 1/4 OF NW 1/4	36	9	12	40	12/18/1941	304	579	441	Quitclaim Deed

REF ALSO PATENT REC:
#30, 02/11/1977, 1397-
1576

REF ALSO: #39,
03/01/1961, 1072-268

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(IID IMPERIAL COUNTY)

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
437	002-650-03-01 SW 1/4 OF NW 1/4	36	9	12	40	12/18/1941	304	579	441		Quitclaim Deed
438	002-650-04-01 E 1/2 OF NW 1/4	36	9	12	80	12/18/1941	304	579	441		Quitclaim Deed
439	002-650-05-01 W 1/2 OF NE 1/4	36	9	12	80	12/18/1941	304	579	441		Quitclaim Deed
440	002-650-06-01 E 1/2 OF NE 1/4	36	9	12	80	12/18/1941	304	579	441	REF ALSO: #39, 03/01/1961, 1072-268	Quitclaim Deed
441	002-650-07-01 S 1/2	36	9	12	320	12/18/1941	304	579	441		Quitclaim Deed
442	003-030-15-01 LOT 6	31	9	13	48.03	3/7/1938	21	482	422		Deed
443	003-090-03-01 ALL	5	10	13	556.68	3/7/1938	21	482	422		Deed
444	003-090-05-01 ALL	7	10	13	640	3/7/1938	21	482	422		Deed
445	003-100-29-01 W 1/2; W 1/2 OF SE 1/4 & SE 1/4 OF SE 1/4	9	10	13	440	3/7/1938	21	482	422		Deed
446	003-180-02-01 ALL	17	10	13	640	3/7/1938	21	482	422		Deed
447	003-180-03-01 ALL	16	10	13	640	12/18/1941	304	579	441		Quitclaim Deed
448	003-180-04-01 ALL	21	10	13	640	3/7/1938	21	482	422		Deed
449	003-180-06-01 ALL	19	10	13	640	3/7/1938	21	482	422		Deed
450	003-190-01-01 W 1/2 OF SW 1/4 & SW 1/4 OF NW 1/4	15	10	13	120	12/18/1941	304	579	441		QuitclaimDeed
451	003-190-26-01 S 1/2; SW 1/4 OF NW 1/4; SW 1/4 OF NE 1/4	22	10	13	400	12/18/1941	304	579	441		QuitclaimDeed
452	003-190-29-01 E 1/2 OF NW 1/4 & NW 1/4 OF NW 1/4	22	10	13	120	12/18/1941	304	579	441	REF ALSO: #20, 01/23/1940, 540-488	QuitclaimDeed
453	003-200-33-01 TRIANGULARY PORTION IN THE NE CORNER OF NW 1/4, LYING IN EAST HIGHLINE CANAL	18	10	14	0.25	5/4/1973	52	1346	493		Deed
454	003-220-01-01 ALL	27	10	13	640	3/7/1938	21	482	422		Deed
455	003-220-16-01 W 1/2	35	10	13	320	3/7/1938	21	482	422		Deed
456	003-220-17-01 E 1/2	34	10	13	320	1/6/1936	112	417	212	REF ALSO: 02/19/1931, 301/96; #65, 08/09/1932, 348-369; #209, 04/18/1934, 375-429; #210, 04/16/1934, 375- 430	Collector's Deed & Conveyance of Real Estate
457	003-230-07-01 N 1/2 OF NW 1/4, EXCEPTING THAT PORTION LYING E OF THE EAST HIGHLINE CANAL	28	10	14	45	9/4/1990	90017752	1658	56		Grant Deed
458	003-330-02-01 ALL	29	10	13	640	3/7/1938	21	482	422		Grant Deed
459	003-330-04-01 NE 1/4	28	10	13	160	11/15/1940	11	560	194		Grant Deed
460	003-330-05-01 ALL	33	10	13	640	3/7/1938	21	482	422		Deed
461	003-330-07-01 ALL	31	10	13	640	3/7/1938	21	482	422		Deed
462	008-010-06-01 NE 1/4, NE 1/4 OF NW 1/4; NE 1/4 OF SE 1/4	5	10	10	240	3/7/1938	21	482	422		Deed
463	010-100-01-01 LOT 1, BLOCK 1					4/12/1991	91006555	1670	960	576-A	Grant Deed
464	010-100-03-01 LOT 3, BLOCK 1					4/12/1991	91006555	1670	962	576-A	Grant Deed
465	010-550-07-01 NE 1/4; N 1/2 OF SE 1/4; SE 1/4 OF SE 1/4	9	10	10	280	3/7/1938	21	482	422		Deed

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(IID IMPERIAL COUNTY)

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
466 010-550-11-01	PART OF SECTION 9, 10-10, DAF: BEG AT SE 1/4 OF TRACT 576 (6-20), BEING A POINT IN THE ELY LINE OF SALTON BAY DRIVE 84 FEET WIDE; TH ELY ALG THE ELY PROLONGATION OF THE SLY LINE OF TRACT 576 TO THE SW COR OF PROPERTY CONVEYED TO ANNETTE SOUTHARD AND WALTER SOUTHARD REC 5/21/64 (1183/1196); TH N 20°08'00" W, 133.37 FT; TH S 69°52'00" W, 100 FT TO THE E LINE OF SALTON BAY DRIVE 96.19 FT TO THE POB	9	10	10	0.26	5/24/1999	99011542	1976	1222		Grant Deed
467 010-550-13-01	PART OF SECTION 9, 10-10, DAF: COMMENCING AT A PT IN ELY LINE OF TR 576 (6-20), DISTANCE THEREON N 20°08'00" W, 176.19' FROM MOST SELY COR OF TR 576, SD ELY LINE BEING ALSO ELY LINE OF SALTON BAY DR, 84.00' WIDE; TH N 69°52'00" E, 100'; TH N 35°03'47" E, 91.34'; TH N 89°44'25" W, 498.69' TO A PT IN ELY LINE 507.37' TO THE TRUE POB; TH S 86°00'00" W, 355.65 FT; TH N 4°00'00" W, 129.71' TO A PT ON SLY LINE OF FLAMINGO PLACE, SD PT BEING ON A CURVE CONCAVE TO THE NW AND HAVING A RADIUS OF 70', A RADIAL LINE WHICH PASSES THROUGH SD PT HAVING A BEARING OF N 4°00'00" W, TH ELY ALG SD LAST MENTIONED CURVE THROUGH A CENTRAL ANGLE OF 64°37'17" AND AN ARC DIST OF 78.95' TO THE INTERSECTION OF THE ELY LINE OF FLAMINGO AVE, 60' WIDE, AND THE ELY PROLONGATION OF THE C/L OF FLAMINGO PLACE, 60' WIDE, BOTH AS SHOWN ON MAP OF TR 576; TH ALG SD PROLONGATION N 86°00'00" E, 302.45' TO A PT IN SD ELY LINE OF THE W 1/2 OF SD SEC 9; TH SLY ALG SD ELY LINE S 0°36'42" E, 170 FT TO THE TRUE POB; AND PART OF SECTION 9, 10-10, DAF: COMMENCING AT A PT IN ELY LINE OF TRACT 576 (6-20), DISTANT THEREON N 20°08'00" W, 176.19' FROM THE MOST SELY COR OF SD TR 576, SD ELY BEING ALSO THE ELY LINE OF SALTON BAY DRIVE, 84.00' WIDE; TH N 69°52'00" E, 100'; TH N 35°03'47" E, 91.34'; TH N 89°44'25" W, 498.59' TO A PT IN THE ELY LINE OF W 1/2 OF SECTION 9; TH N 0°36'42" W, ALG SD ELY LINE, 507.37'; TH S 86°00'00" W, 355.65' TO THE TRUE P.O.B.; TH S 86°00'00" W, 488.25' TO A PT ON THE ELY LINE OF SALTON BAY DRIVE, SD PT BEING ON A CURVE CONCAVE TO THE E AND HAVING A RADIUS OF 850'; TH NLY ALG SD CURVE THROUGH A CENTRAL ANGLE OF 01°14'56" AND AN ARC DISTANCE OF 20.71 FT; TH TANGENT TO SD LAST MENTIONED CURVE N 15°52'34"W, 85.14' TO THE BEG OF A TANGENT CURVE CONCAVE TO THE SE AND HAVING A RADIUS OF 30'; TH NLY & ELY ALG SD TANGENT CURVE THROUGH A CENTRAL ANGLE OF 101°52'34" AND AN ARC DISTANCE OF 53.34' TO THE SLY LINE OF FLAMINGO PLACE, 600' WIDE; TH ELY ALG SD SLY LINE N 86°00'00" E, 432.94' TO THE BEG OF A TANGENT CURVE CONCAVE TO THE S AND HAVING A	9	10	10	2.85	7/31/1998	98017536	1940	727		Grant Deed

EXHIBIT D-1
(IID IMPERIAL COUNTY)

APN	LEGAL DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION TRACT	DOC TYPE
	RADIUS OF 50'; TH ELY ALG SD TANGENT CURVE THROUGH A CENTRAL ANGLE OF 23°33'23" AND AN ARC DISTANCE OF 20.58' TO THE BEG OF A REVERSING CURVE CONCAVE TO THE NE AND HAVING A RADIUS OF 70'; TH ELY ALG SD REVERSING CURVE THROUGH A CENTRAL ANGLE OF 23°33'23" AND AN ARC DISTANCE OF 28.78' TO A PT, SD PT LY N 04°00'00" W FROM THE TRUE POB; TH S 04°00'00" E, 129.71' TO THE TRUE POB										
468 010-550-16-01	PART OF SECTION 9, 10-10, D.A.F.: BEG AT A PT IN ELY LI OF TR 576 (6-20), DISTANT THEREON N 20°08'00" W, 96.19 FT FROM THE MOST SLY CORNER OF SD TR. SD ELY LI BEING ALSO THE ELY LI OF SALTON BAY DRIVE, 84 FT WIDE; TH CONTINUING ALG SD ELY LI N 20°08'00" W, 80 FT; TH LEAVING SD ELY LI N 69°52'00" E, 100 FT; TH N 35°03'47" E, 91.34 FT; TH S 89°44'24" E, 498.69 FT TO A PT IN THE ELY LI OF W 1/2 OF SD SEC 9; TH S 0°36'42" E ALG SD LAST MENTIONED ELY LI, 275.03 FT TO A PT IN THE ELY PROLONGATION OF THE MOST SLY LI OF SD TR 576; TH ALG SD ELY PROLONGATION N 89°44'25" W, 480.65 FT; TH N 20°08'00" W, 133.37 FT; TH S 09°52'W, 100 FT TO THE P.O.B. (3.46 AC); AND PART OF SECTION 9, 10-10, D.A.F.: BEG AT A PT AT THE MOST SELY CORNER OF TRACT 576 (6-20); TH N 20°03'00" W, 178.19 FT ALG THE ELY LI OF TR 576, SD ELY LI ALSO BEING THE ELY LI OF SALTON BAY DRIVE, 84 FT WIDE, AS SHOWN ON SD MAP OF TR 576; TH N 69°52'00" E, 28.30 FT TO THE TRUE P.O.B.; TH CONTINUING N 69°52'00" E, 45 FT; TH N 20°08'00" W, 198.14 FT; TH S 69°52'00" W, 45 FT; TH S 20°08'00" E, 198.14 FT TO THE TRUE P.O.B. (0.20 AC)	9	10	10	3.66	5/24/1999	99011542	1976	1222		Grant Deed

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(IID IMPERIAL COUNTY)

APN	LEGAL DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
469 010-550-19-01	PART OF SECTION 9, 10-10, DAF: BEG AT THE C/L OF INTERSECTION OF FLAMINGO AVENUE AND THE ALLEY BETWEEN YACHT CLUB DRIVE AND FLAMINGO PLACE PER TRACT 576 (6-20); TH N 86°00'00" E, ON A PROLONGATION OF THE C/L OF SD ALLEY 120.20'; TH N 04°00'00" W, 69.50' TO THE TRUE P.O.B., THE TRUE P.O.B. BEING THE MOST SLY COR OF THIS DESCRIBED PARCEL; TH N 75°30'00" E, 118'; TH N 14°30'00" W, 92'; TH S 75°30'00" W, 116'; TH S 14°30'00" E, 92' TO THE TRUE POB	9	10	10	0.24	7/31/1998	98017536	1940	727		Grant Deed
470 010-550-20-01	PART OF THE W 1/2, SECTION 9, 10-10, DAF: BEG AT THE C/L INTERSECTION OF YACHT CLUB DRIVE AND FLAMINGO AVENUE PER TRACT 576 (6-20); TH N 86°00'00" E, 30' TO THE TRUE POB SD TRUE P.O.B. BEING ON THE ELY R/W LI OF SD FLAMINGO AVENUE; TH S 04°00'00" E, 37.61 FT TO THE BEG OF THE TANGENT CURVE CONCAVE TO THE NE AND HAVING A RADIUS OF 270'; TH SLY ALG SD LAST CURVE THROUGH A CENTRAL ANGLE OF 04°05'27" AND AN ARC DIST OF 19.28' TO A PT WHICH HAS A RADIAL BEARING OF N 81°54'33" E; TH NON-RADIAL TO SD LAST CURVE N 75°30'00" E, 163.21'; TH S 14°30'00" E, 82' TO A PT ON THE N LI OF THE CERTAIN PARCEL OF LAND CONVEYED TO SALTON BAY YACHT CLUB MOTOR HOTEL, A GENERAL PARTNERSHIP BY DEED REC 9-13-65 IN BK 1214, PG 906, O.R.; TH N 75°30'00" E ALG SD N LI OF THAT CERTAIN PARCEL CONVEYED BY DEED REC IN BK 1214, PG 906, O.R. AND ITS ELY EXT 225.63' TO THE NORTH-SOUTH C/L OF SD SEC 9; TH N 00°36'42" W, 478.79' ALG SD C/L TO THE SE COR OF LOT 1, BLK 2, TRACT 576A (7-17), SD COR ALSO BEING A PT ON A CURVE CONCAVE TO THE SE AND HAVING A RADIUS OF 130'; TH SWLY ALG THE S LI OF SD LOT 1, BLK 2, TRACT 576A, THROUGH A CENTRAL ANGLE OF 21°30'00" AND AN ARC DIST OF 48.78'; TH TANGENT S 29°00'00" W, 63.81' TO THE BEG OF A TANGENT CURVE CONCAVE TO THE NW AND HAVING A RADIUS OF 100'; TH SWLY ALG SD CURVE THROUGH A CENTRAL ANGLE OF 61°15'35" AND AN ARC DIST OF 106.92'; TH TANGENT N 89°44'25" W, 306.78'; TH S 30°00'00" W, 16.89' TO A PT ON A RADIAL CURVE CONCAVE TO THE SW AND HAVING A RADIUS OF 110'; SD PT ALSO BEING ON THE NELY R/W LI OF FLAMINGO AVENUE OF SD TR 576A; TH SELY ALG SD CURVE THROUGH A CENTRAL ANGLE OF 56°00'00" AND AN ARC DIST OF 107.51 FT; TH TANGENT S 04°00'00" E, 195.43' TO THE TRUE POB	9	10	10	3.52	7/31/1998	98017536	1940	727		Grant Deed

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
471 010-550-21-01	<p>PART OF SECTION 9, 10-10, DAF: COMMENCING AT A PT IN ELY LINE OF TR 576 (8-20), DISTANCE THEREON N 20°08'00" W, 176.19' FROM MOST SELY COR OF TR 576, SD ELY LINE BEING ALSO ELY LINE OF SALTON BAY DR, 84.00' WIDE; TH N 89°52'00" E, 100'; TH N 35°03'47" E, 91.34'; TH N 89°44'25" W, 498.69' TO A PT IN ELY LINE 507.37' TO THE TRUE POB; TH S 86°00'00" W, 355.65 FT; TH N 4°00'00" W, 129.71' TO A PT ON SLY LINE OF FLAMINGO PLACE, SD PT BEING ON A CURVE CONCAVE TO THE NW AND HAVING A RADIUS OF 70', A RADIAL LINE WHICH PASSES THROUGH SD PT HAVING A BEARING OF N 4°00'00" W, TH ELY ALG SD LAST MENTIONED CURVE THROUGH A CENTRAL ANGLE OF 64°37'17" AND AN ARC DIST OF 78.95' TO THE INTERSECTION OF THE ELY LINE OF FLAMINGO AVE, 60' WIDE, AND THE ELY PROLONGATION OF THE C/L OF FLAMINGO PLACE, 60' WIDE, BOTH AS SHOWN ON MAP OF TR 576; TH ALG SD PROLONGATION N 86°00'00" E, 302.45' TO A PT IN SD ELY LINE OF THE W 1/2 OF SD SEC 9; TH SLY ALG SD ELY LINE S 0°36'42" E, 170 FT TO THE TRUE POB; AND PART OF SECTION 9, 10-10, DAF: COMMENCING AT A PT IN ELY LINE OF TRACT 576 (8-20), DISTANT THEREON N 20°08'00" W, 176.19' FROM THE MOST SELY COR OF SD TR 576, SD ELY BEING ALSO THE ELY LINE OF SALTON BAY DRIVE, 84.00' WIDE; TH N 89°52'00" E, 100'; TH N 35°03'47" E, 91.34'; TH N 89°44'25" W, 498.59' TO A PT IN THE ELY LINE OF W 1/2 OF SECTION 9; TH N 0°36'42" W, ALG SD ELY LINE, 507.37'; TH S 86°00'00" W, 355.65' TO THE TRUE P.O.B.; TH S 86°00'00" W, 488.25' TO A PT ON THE ELY LINE OF SALTON BAY DRIVE, SD PT BEING ON A CURVE CONCAVE TO THE E AND HAVING A RADIUS OF 950'; TH NLY ALG SD CURVE THROUGH A CENTRAL ANGLE OF 01°14'56" AND AN ARC DISTANCE OF 20.71 FT; TH TANGENT TO SD LAST MENTIONED CURVE N 15°52'34"W, 85.14' TO THE BEG OF A TANGENT CURVE CONCAVE TO THE SE AND HAVING A RADIUS OF 30'; TH NLY & ELY ALG SD TANGENT CURVE THROUGH A CENTRAL ANGLE OF 101°52'34" AND AN ARC DISTANCE OF 53.34' TO THE SLY LINE OF FLAMINGO PLACE, 800' WIDE; TH ELY ALG SD SLY LINE N 86°00'00" E, 432.94' TO THE BEG OF A TANGENT CURVE CONCAVE TO THE S AND HAVING A RADIUS OF 50'; TH ELY ALG SD TANGENT CURVE THROUGH A CENTRAL ANGLE OF 23°33'23" AND AN ARC DISTANCE OF 20.56' TO THE BEG OF A REVERSING CURVE CONCAVE TO THE NE AND HAVING A RADIUS OF 70'; TH ELY ALG SD REVERSING CURVE THROUGH A CENTRAL ANGLE OF 23°33'23" AND AN ARC DISTANCE OF 28.78' TO A PT, SD PT LY N 04°00'00" W FROM THE TRUE POB; TH S 04°00'00" E, 129.71' TO THE TRUE POB</p>	9	10	10	3.34	7/31/1998	98017536	1940	727		Grant Deed

EXHIBIT D-1
(IID IMPERIAL COUNTY)

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
472 010-550-22-01	PART OF SECTION 9, 10-10, DAF: COMM AT A PT IN THE ELY LINE OF TR 576 (6-20), DISTANCE THEREON N 20°08'00" W, 176.19' FROM THE MOST SELY COR OF SD TR 576, SD ELY LINE BEING ALSO THE ELY LINE OF SALTON BAY DRIVE, 84.00' WIDE; TH N 69°52'00" E, 100' TO A PT; TH N 35°03'47" E, 81.34' TO A PT; TH N 89°44'25" E, 498.69' TO A PT IN THE ELY LINE OF W 1/2 OF HEREIN DESCRIBED SEC 9; TH N 0°36'42" W ALG SD ELY LINE, 257.37' TO THE TRUE P.O.B.; TH CONT N 0°36'42" W ALG SD ELY LINE, 250' TO A PT; TH S 86°00'00" W, 843.90' TO A PT ON ELY LINE OF HEREINBEFORE DESCRIBED SALTON BAY DRIVE, AT SD PT BEING ON A CURVE CONCAVE TO THE E AND HAVING A RADIUS OF 950'; TH SLY ALG SD CURVE THROUGH A CENTRAL ANGLE OF 03°00'30" AN ARC DIST OF 49.88' TO A PT; TH TANGENT TO SD CURVE AND ALG THE ELY LINE OF SALTON BAY DRIVE S 20°08'00" E, TO A PT DUE W OF THE POB; TH DUE E TO THE POB	9	10	10	4.60	7/31/1998	96017536	1940	727		Grant Deed
473 010-564-02-01	LOT 1, BLOCK 1, EXCEPTING THEREFROM ANY PORTION THEREOF LYING WITH LOT "A" OF SD BLOCK 1	9	10	10	7.27	8/9/1996	96018928	1858	101	TRACT 578 (7-75)	Grant Deed
474 010-566-04-01	LOT 1, BLOCK 4	9	10	10	15	1/31/2002	2002-02840	2104	1461	TRACT 578 (7-75); ALSO REF: #98022101, 09/21/1998, 1946-1778	Quitclaim Deed & Grant Deed
475 010-566-05-01	LOT 2, BLOCK 4	9	10	10	7.35	1/31/2002	2002-02840	2104	1461	TRACT 578 (7-75); ALSO REF: #98022101, 09/21/1998, 1946-1778	
476 010-566-06-01	LOT 2, BLOCK 2, AND THAT PORTION OF LOT 3, BLOCK 2, TRACT 578 (7-75), DAF: BEGINNING AT THE NW CORNER OF SAID LOT 3; THENCE S 58°00'00" E, ALONG THE SOUTHWESTERLY LINE OF LOT 3, A DISTANCE OF 168 FEET; THENCE NORTHERLY TO A POINT IN THE SOUTHERLY LINE OF SALTON BAY DRIVE AS SHOWN ON SAID MAP; DISTANT 151 FEET MEASURED EASTERLY ALONG THE SOUTHERLY LINE OF SAID DRIVE; THENCE WESTERLY ALONG SAID DRIVE 151 FEET TO THE POINT OF BEGINNING	9	10	10	4.04	11/8/1994	94027283	1789	5	TRACT 578 (7-75)	Grant Deed
477 010-566-07-01	PART OF LOT 3, BLOCK 2, TRACT 578 (7-75), EXCEPTING THAT PORTION DAF: BEGINNING AT THE NW CORNER OF SAID LOT 3; THENCE S 58°00'00" E, ALONG THE SOUTHWESTERLY LINE OF LOT 3, A DISTANCE OF 168 FEET; THENCE NORTHERLY TO A POINT IN THE SOUTHERLY LINE OF SALTON BAY DRIVE AS SHOWN ON SAID MAP; DISTANT 151 FEET MEASURED EASTERLY ALONG THE SOUTHERLY LINE OF SAID DRIVE; THENCE WESTERLY ALONG SAID DRIVE 151 FEET TO THE POINT OF BEGINNING	9	10	10	3.48	11/8/1994	94027283	1789	5	TRACT 578 (7-75)	Grant Deed

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478	010-567-01-01 LOT 1, BLOCK 3	9	10	10		11/8/1994	94027283	1789	5	TRACT 578 (7-75)	Grant Deed
479	013-151-07-01 LOT 7, BLOCK 1	16	10	10		11/6/1997	97025040	1910	762	TRACT 559 (7-67)	Grant Deed
480	014-073-01-01 LOT 4, BLOCK 10					2/11/1959	57	1015	477	TRACT 565 (4-69)	Corporation Grant Deed
481	017-130-01-01 ALL	3	10	10	640	3/7/1938	21	482	422		Deed
482	017-130-03-01 ALL	1	10	10	640	3/7/1938	21	482	422		Deed
483	017-130-05-01 ALL	11	10	10	640	3/7/1938	21	482	422		Deed
484	017-140-01-01 NE 1/4 & N 1/2 OF NW 1/4	15	10	10	240	3/7/1938	21	482	422		Deed
485	017-140-08-01 NE 1/4 & NE 1/4 OF NW 1/4	23	10	10	200	3/7/1938	21	482	422		Deed
486	017-140-25-01 PT LYING SELY OF TRACT 744 (10-5) AND TRACT 585-A (7-69), AND TRACT 742 (10-1), AND LYING ELY OF LAND CONVEYED TO SALTON COMMUNITY SERVICES DISTRICT RECORDED 7-9-82 IN BK 1115, PG 471, AND LYING SELY OF SELY BNDY OF PARCEL 2 OF PARCEL MAP M-1746 (7-28)	22	10	10	366	8/8/1998	98019070	1942	1248		Final Order of Condemnation
487	018-010-29-01 THAT PORTION OF THE SE 1/4, DAF: BEG AT THE INTERSECTION OF THE EAST LINE OF SEC 13, WITH THE SOUTH RIGHT-OF-WAY LINE OF STATE HWY 78, AS SHOWN ON LS MAP (4-39); THENCE ALONG SAID STATE HWY RIGHT-OF-WAY, WEST 248.70 FEET; THENCE S 0°50'30" E, 208.70 FEET; THENCE EAST PARALLEL TO THE SOUTH RIGHT-OF-WAY OF STATE HWY 78, 248.70 FEET TO THE EAST LINE OF SAID SECTION 13; THENCE N 0°50'30" W, 208.70 FEET TO THE POINT OF BEGINNING; EXCEPTING THEREFROM THE EAST 40 FEET THEREOF	13	12	9	1	4/4/1960	4	1047	201		Grant Deed
488	019-020-01-01 N 1/2	3	12	11	321.80	3/7/1938	21	482	422		Deed
489	019-020-06-01 ALL	1	12	11	642.14	3/7/1938	21	482	422		Deed
490	019-020-12-01 PARCELS IID-A, IID-B & IID-C, PARCEL MAP M-2233 (11-12)	3	12	11	3.40	1/5/2001	2001-00230	2041	418		Grant Deed
491	019-020-23-01 PARCELS IID-E, IID-F & IID-G, PARCEL MAP M-2233 (11-12)	11	12	11	70.72	1/5/2001	2001-00230	2041	418		Grant Deed
492	019-030-02-01 ALL	5	12	12	643.48	3/7/1938	21	482	422		Deed
493	019-030-04-01 ALL	9	12	12	640	3/7/1938	21	482	422		Deed
494	019-030-06-01 ALL	7	12	12	652.94	3/7/1938	21	482	422		Deed
495	019-040-01-01 ALL	3	12	12	644.36	3/7/1938	21	482	422		Deed
496	019-040-03-01 SE 1/4	2	12	12	160	5/4/1973	52	1346	493		Deed
497	019-040-04-01 ALL	1	12	12	643.64	3/7/1938	21	482	422		Deed
498	019-040-05-01 NE 1/4	12	12	12	160	1/6/1936	92 - 95	417	192 - 195		Collector's Deed

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499 019-040-06-01 SE 1/4		12	12	12	160	3/25/1938	13	485	65	ALSO REF: #97, 01/06/1936, 417-197; #99, 01/06/1936, 417-198; #25 & #28, 01/15/1936, 417- 273 & 274;	Quitclaim Deed & Collector's Deed
500 019-040-07-01 SW 1/4		12	12	12	160	3/25/1938	13	485	65	ALSO REF: #96, 01/06/1936, 417-198; #98, 01/06/1936, 417-198; #25, 01/15/1936, 417-273	Quitclaim Deed & Collector's Deed
501 019-040-08-01 NW 1/4		12	12	12	160	1/6/1936	88 - 91	416	165 - 188		Collector's Deed & Conveyance of Real Estate Deed
502 019-040-09-01 ALL		11	12	12	640	3/7/1938	21	482	422		Deed
503 019-040-10-01 SE 1/4		10	12	12	160	5/4/1973	52	1346	493	ALSO REF: #4, 07/29/53	Deed
504 019-040-11-01 SW 1/4		10	12	12	160	5/14/1932	153	348	15	#33 #34, #35 & #36, 04/16/1934, 375-253, 254, 255 & 256	Conveyance of Real Estate
505 019-060-07-01	PORTION SW 1/4 SEC 17, 12-11 DAF; BEGINNING AT A 6- INCH CONCRETE MONUMENT ON THE WEST LINE OF SAID SECTION 17, DISTANT THEREON S 1°28' E, 50.02 FEET FROM THE NW CORNER OF SAID SW 1/4; THENCE ALONG A LINE PARALLEL WITH AND DISTANT 50 FEET SOUTH OF THE NORTH LINE OF SAID SW 1/4, S 89°58'10" E, 75.00 FEET; THENCE S 1°28' E, 75.00 FEET; THENCE N 89°58'10" W, 75.00 FEET TO SAID WEST LINE N 1°28' W, 75.00 FEET TO THE P.O.B.	17	12	11	0.129	11/10/1949	45	762	555		Director's Deed
506 019-070-03-01 N 1/2		13	12	11	220	3/1/1946	30	653	239		Grant Deed
507 019-070-38-01	PARCELS IID-H & IID-I, PARCEL MAP M-2233 (11-12)	13	12	11	64.26	1/5/2001	230	2041	418		Grant Deed
508 019-080-01-01	LOTS 3 & 4 & E 1/2 NW 1/4; LOTS 5 & 6 & E 1/2 SW 1/4, SE 1/4; (NO DEED ON FILE FOR NE 1/4)	18	12	12	655	5/3/1937	27	456	116	ALSO REF: #29, 01/19/1938, 480-352	Bargain and Sale Deed & Grant Deed Deed
509 019-080-02-01 ALL		17	12	12	640	5/7/1938	21	482	422		Deed
510 019-080-03-01 W 1/2		16	12	12	320	5/14/1937	9	454	570	ALSO REF: #38, 02/04/1938, 479-511	Grant Deed & Collector's Deed
511 019-080-04-01 NW 1/4 OF NE 1/4		16	12	12	40	5/14/1937	9	454	570	ALSO REF: #44, 02/04/1938, 479-514	Grant Deed & Collector's Deed
512 019-080-05-01 NE 1/4 OF NE 1/4		16	12	12	40	5/4/1939	19	521	520		Grant Deed
513 019-080-06-01 S 1/2 OF NE 1/4 (aka SE 1/4 OF NE 1/4 & SW 1/4 OF NE 1/4)		16	12	12	80	5/14/1937	9	454	570	ALSO REF: #39-40, 02/04/1938, 511-512; #42, 02/04/1938, 479/513	Grant Deed & Collector's Deed
514 019-080-08-01 ALL		21	12	12	640	5/7/1938	21	482	422		Deed

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515 019-080-10-01	SW 1/4, NW 1/4	20	12	12	320	3/23/1936	27	419	571	ALSO REF: #24, 03/21/1939, 517-469	Grant Deed & Quitclaim Deed
516 019-080-11-01	N 1/2 & N 1/2 OF SW 1/4 & SE 1/4	19	12	12	570.54	5/7/1938	21	482	422		Deed
517 019-090-01-01	ALL	15	12	12	640	3/7/1938	21	482	422		Deed
518 019-090-03-01	N 1/2	14	12	12	320	11/5/1937	26	472	556		Grant Deed
519 019-090-04-01	SE 1/4	14	12	12	160	11/26/1938	15	506	17		Deed
520 019-090-07-01	N 1/2 & ALL THAT PART OF THE S 1/2, LYING N OF NEW RIVER	24	12	12	520.83	1/3/1990	90-00187	1639	1467		Individual Grant Deed
521 019-090-08-01	PART OF S 1/2, LYING S OF N BANK OF NEW RIVER	24	12	12	49	11/12/1958	85	1008	380	ALSO REF: #21, 11/26/1935, 415-29; #40, 12/11/1945, 651-191	Deed & Grant Deed & Quitclaim Deed
522 019-090-09-01	PART OF S 1/2, LYING S OF N BANK OF NEW RIVER	24	12	12	55	11/12/1958	85	1008	380	ALSO REF: #21, 11/26/1935, 415-29; #40, 12/11/1945, 651-191	Deed & Grant Deed & Quitclaim Deed
523 019-090-10-01	ALL	23	12	12	640	3/7/1938	21	482	422		Deed
524 019-090-11-01	NE 1/4	22	12	12	154	5/4/1973	52	1346	493	ALSO REF: #26, 7/20/46	Deed
525 019-090-12-01	SW 1/4 & SE 1/4, LYING BELOW THE -230 CONTOUR	22	12	12	320	5/28/1937	21	455	579	ALSO REF: #12, 05/16/1938, 492-206	Quitclaim Deed
526 019-090-14-01	N 1/2, SW 1/4 & W 1/2 OF SE 1/4 (aka PARCEL 1 OF COC LLA #128)	13	12	12	562.88	3/7/1938	21	482	422	ALSO REF: COC LLA #00128, #99026002, 12/02/1999, 1998/544	Deed & COC LLA
527 019-140-04-01	NE 1/4 OF NE 1/4	30	12	12	39.1	6/20/1995	95013129	1811	1081		Grant Deed
528 019-170-01-01	N 1/2	29	12	12	320	5/7/1938	21	482	422		Deed
529 019-170-05-01	NE 1/4 OF NE 1/4; SE 1/4 OF NE 1/4	28	12	12	80	1/6/1936	47-48	416	124-125		Collector's Deed
530 019-170-06-01	NE 1/4 OF SE 1/4; SE 1/4 OF SE 1/4	28	12	12	80	1/6/1936	49-50	416	126-127		Collector's Deed
531 019-170-07-01	W 1/2 OF SE 1/4	28	12	12	80	10/27/1976	164	1393	1312	ALSO REF: #39, 12/05/1941, 10A-171	Deed & Collector's Deed
532 019-170-12-01	E 1/2 OF SW 1/4	28	12	12	80	12/5/1941	40	10-A	172		Collector's Deed
533 019-180-01-01	ALL	27	12	12	640	5/3/1937	21	482	422		Deed
534 019-180-02-01	W 1/2 OF NW 1/4	26	12	12	80	5/14/1936	21	429	199		Grant Deed
535 019-180-03-01	E 1/2 OF NW 1/4; N 1/2 OF SW 1/4	26	12	12	160	4/16/1934	55-57	375	275-277	ALSO REF: #40, 08/17/1948	Conveyance of Real Estate (#55-57) & Quiet Title Action (#40)
536 019-180-08-01	NE 1/4	26	12	12	120	1/6/1936	-	416	156		Collector's Deed
537 019-180-17-01	SE 1/4	34	12	12	160	12/17/1940	164 & 168	5-A	237 & 241		Collector's Deed
538 019-180-19-01	S 1/2 OF N 1/2	34	12	12	160	1/6/1936	74	416	151		Collector's Deed

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539 019-180-20-01	N 1/2 OF N 1/2	34	12	12	160	1/6/1936	74	416	151		Collector's Deed
540 019-180-21-01	W 1/2 OF SE 1/4	26	12	12	80	3/6/1997	97005785	1881	1391		Grant Deed
541 020-010-04-01	ALL	3	11	13	644.6	3/7/1938	21	482	422		Deed
542 020-010-12-01	ALL, EXCEPT E 1/2 OF SE 1/4	11	11	13	560	3/7/1938	21	482	422		Deed
543 020-010-13-01	E 1/2 OF SE 1/4	11	11	13	80	3/7/1938	21	482	422		Deed
544 020-010-15-01	E 1/2 OF SE 1/4	10	11	13	80	12/5/1936	20	447	111		Quitclaim Deed
545 020-010-16-01	NE 1/4	10	11	13	160	12/5/1936	21	445	474		Quitclaim Deed
546 020-010-17-01	SW 1/4; W 1/2 OF SE 1/4; NE 1/4 OF NW 1/4; SE 1/4 OF NW 1/4; NW 1/4 OF NW 1/4	10	11	13	360	3/29/1944	10	616	331	ALSO REF: #1, 08/09/1953, 865-200; # 65-70, 2-4-38, 479-527	Grant Deed & Collector's Deed
547 020-010-20-01	ALL	9	11	13	640	3/7/1938	21	482	422		Deed
548 020-010-24-01	S 1/2	17	11	13	320	3/7/1938	21	482	422		Deed
549 020-010-25-01	N 1/2	17	11	13	320	3/7/1938	21	482	422		Deed
550 020-010-26-01	ALL	15	11	13	640	3/7/1938	21	482	422		Deed
551 020-010-28-01	NW 1/4; SW 1/4	14	11	13	320	10/17/1936	15 & 16	442 & 443	242 & 258	ALSO REF: #71, 04/10/1940, 2A-399	Grant Deed & Collector's Deed
552 020-010-29-01	NE 1/4; SE 1/4, EXCEPTING SE 1/4 OF SE 1/4	14	11	13	280	4/16/1934	164 & 165	375	384 & 385		Conveyance of Real Estate
553 020-010-36-01	NW 1/4	16	11	13	160	5/4/1973	52	1346	493		Deed
554 020-010-37-01	NW 1/4 OF SW 1/4; W 1/2 OF SW 1/4 OF SW 1/4	16	11	13	60	2/19/1931	102	301	65	ALSO REF: #159, 04/16/1934, 375-379	Conveyance of Real Estate
555 020-010-38-01	NW 1/4 OF NE 1/4; SW 1/4 OF NE 1/4; NW 1/4 OF SE 1/4; NE 1/4 OF SW 1/4; SE 1/4 OF SW 1/4; E 1/2 OF SW 1/4 OF SW 1/4	16	11	13	220	4/16/1934	161	375	381	ALSO REF: #160, 04/16/1934, 375-380; #152-153, 04/16/1934, 375/372-373; #155, 04/16/1934, 375-375; #146, 04/16/1934, 375-366	Conveyance of Real Estate
556 020-010-39-01	NE 1/4 OF SE 1/4; S 1/2 OF SE 1/4	16	11	13	120	5/4/1973	52	1346	493		Deed
557 020-010-40-01	E 1/2 OF NE 1/4	18	11	13	80	3/7/1962	60	1104	618		Patent & Deed
558 020-020-02-01	NE 1/4 OF NW 1/4;	2	11	13	25	4/16/1934	192	375	412		Conveyance of Real Estate
559 020-030-03-01	E 1/2 OF NE 1/4 OF NW 1/4 OF NE 1/4 OF NE 1/4; W 1/2 OF NE 1/4 OF NW 1/4 OF NE 1/4 OF NE 1/4; E 1/2 OF NW 1/4 OF NW 1/4 OF NE 1/4 OF NE 1/4 (ARB LOTS 5, 6 & 7)	2	11	13	3.75	3/9/1987	87-3465	1567	822		Tax Deed To Purchaser of Real Property
560 020-030-09-01	E 1/2 OF SW 1/4 OF NE 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 30)	2	11	13	1.25	12/18/1979	83	1444	1559		Deed
561 020-030-11-01	E 1/2 OF SE 1/4 OF NW 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 28)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
562 020-030-14-01	W 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 OF NE 1/4 (ARB	2	11	13	1.25	5/4/1973	52	1346	493		Deed

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	LOT 40)										
563	020-030-15-01 E 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 39)	2	11	13	1.25	9/30/1974	39	1367	1168		Deed
564	020-030-17-01 E 1/2 OF NE 1/4 OF SW 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 37)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
565	020-030-18-01 W 1/2 OF NW 1/4 OF SE 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 36)	2	11	13	1.25	2/29/1984	69	1517	1147		Tax Deed To Purchaser of Real Property
566	020-030-19-01 E 1/2 OF NW 1/4 OF SE 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 35)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
567	020-030-22-01 W 1/2 OF SW 1/4 OF SE 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 61)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
568	020-030-25-01 E 1/2 OF SW 1/4 OF SW 1/4 OF NE 1/4 OF NE 1/4; E 1/2 OF NW 1/4 OF NW 1/4 OF SE 1/4 OF NE 1/4 & W 1/2 OF NW 1/4 OF NW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOTS 58, 71 & 72)	2	11	13	3.75	5/4/1973	52	1346	493		Deed
569	020-030-26-01 W 1/2 OF SW 1/4 OF SW 1/4 OF NE 1/4 OF NE 1/4 (ARB LOT 57)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
570	020-030-29-01 W 3/5 OF S 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOTS 83, 84 & 85)	2	11	13	3	7/20/2001	0116405	2071	1186		Grant Deed
571	020-030-30-01 W 1/2 OF NE 1/4 OF NW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 70)	2	11	13	1.25	3/19/1990	90-4858	1644	745		Tax Deed To Purchaser of Real Property
572	020-030-32-01 W 1/2 OF NW 1/4 OF NE 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 68)	2	11	13	1.25	5/4/1973	90-4858	1346	493		Deed
573	020-030-33-01 E 1/2 OF NW 1/4 OF NE 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 67)	2	11	13	1.25	9/30/1974	39	1367	1168		Tax Collector Deed
574	020-030-34-01 NE 1/4 OF NE 1/4 OF SE 1/4 OF NE 1/4 & E 1/2 OF SE 1/4 OF NE 1/4 OF SE 1/4 OF NE 1/4 (ARB LOTS 65, 66 & 99)	2	11	13	3.75	5/4/1973	52	1346	493		Deed
575	020-030-37-01 W 1/2 OF SE 1/4 OF NW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 94)	2	11	13	1.25	9/30/1974	39	1367	1168		Tax Collector Deed
576	020-030-48-01 E 1/2 OF NE 1/4 OF SW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 104)	2	11	13	1.25	3/9/1987	873466	1576	824		Tax Deed To Purchaser of Real Property
577	020-030-52-01 E 1/2 OF SE 1/4 OF SE 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 131)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
578	020-030-53-01 W 1/2 OF SE 1/4 OF SE 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 130)	2	11	13	1.25	12/18/1979	82	1444	1556		Tax Collector Deed
579	020-030-55-01 W 1/2 OF SW 1/4 OF SE 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 128)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
580	020-030-57-01 W 1/2 OF SE 1/4 OF SW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 128)	2	11	13	1.25	5/4/1973	52	1346	493		Deed

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
581 020-030-58-01	E 1/2 OF SW 1/4 OF SW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 125)	2	11	13	1.25	2/6/1985	28	1535	1581		Tax Deed To Purchaser of Real Property
582 020-030-59-01	W 1/2 OF SW 1/4 OF SW 1/4 OF SE 1/4 OF NE 1/4 (ARB LOT 124)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
583 020-030-62-01	E 1/2 OF SW 1/4 OF SE 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 121)	2	11	13	1.25	9/11/1974	41	1366	1968		Tax Collector Deed
584 020-030-63-01	W 1/2 OF SW 1/4 OF SE 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 120)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
585 020-030-64-01	S 1/2 OF SW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOTS 116, 117, 118 & 119)	2	11	13	5	5/4/1973	52	1346	493		Deed
586 020-030-66-01	W 1/5 OF E 2/5 OF N 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 79)	2	11	13	1	5/4/1973	52	1346	493		Deed
587 020-030-67-01	E 2/5 OF S 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOTS 86 & 87)	2	11	13	2	5/4/1973	52	1346	493		Deed
588 020-030-68-01	E 1/5 OF N 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 78)	2	11	13	1	5/4/1973	52	1346	493		Deed
589 020-030-69-01	W 1/5 OF N 1/2 OF NE 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 77)	2	11	13	1	5/4/1973	52	1346	493		Deed
590 020-030-70-01	S 1/2 OF NE 1/4 OF SW 1/4 OF NE 1/4 (ARB LOTS 88, 89, 90 & 91)	2	11	13	5	5/4/1973	52	1346	493		Deed
591 020-030-71-01	E 1/5 OF N 1/2 OF NE 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 73)	2	11	13	1	5/4/1973	52	1346	493		Deed
592 020-030-72-01	CENTRAL 1/5 OF N 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 80)	2	11	13	1	5/4/1973	52	1346	493		Deed
593 020-030-73-01	E 1/5 OF W 2/5 OF N 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/4 (ARB LOT 81)	2	11	13	1	5/4/1973	52	1346	493		Deed
594 020-030-74-01	W 1/5 OF N 1/2 OF NW 1/4 OF SW 1/4 OF NE 1/2 (ARB LOT 82)	2	11	13	1	5/4/1973	52	1346	493		Deed
595 020-040-03-01	W 1/2 OF NE 1/4 OF NW 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 161)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
596 020-040-08-01	E 1/2 OF NE 1/4 OF NE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 156)	2	11	13	1.25	10/24/1989	89-17455	1634	1744		QuitclaimDeed
597 020-040-09-01	W 1/2 OF NW 1/4 OF NW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 155)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
598 020-040-10-01	E 1/2 OF NW 1/4 OF NW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 154)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
599 020-040-12-01	E 1/2 OF NE 1/4 OF NW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 152)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
600 020-040-13-01	W 1/2 OF NW 1/4 OF NE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 151)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
601 020-040-15-01	W 1/2 OF NE 1/4 OF NE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 149)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
602 020-040-18-01	W 1/2 OF SE 1/4 OF NE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 178)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
603 020-040-20-01	W 1/2 OF SW 1/4 OF NE 1/4 OF NE 1/4 OF SW 1/4 (ARB	2	11	13	1.25	7/20/2001	116405	2071	1186		Grant Deed

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
	LOT 176)										
604	020-040-21-01 E 1/2 OF SE 1/4 OF NW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 175)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
605	020-040-22-01 W 1/2 OF SE 1/4 OF NW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 174)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
606	020-040-27-01 E 1/2 OF SW 1/4 OF NW 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 165)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
607	020-040-29-01 W 1/2 OF NW 1/4 OF SW 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 227)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
608	020-040-35-01 NW 1/4 OF SW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOTS 218 & 219)	2	11	13	2.5	11/4/1997	97024812	1910	231		Corporation Grant Deed
609	020-040-39-01 NE 1/4 OF SE 1/4 OF NE 1/4 OF SW 1/4 & W 1/2 OF SE 1/4 OF SE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOTS 212, 213 & 242)	2	11	13	3.75	7/20/2001	16405	2071	1186		Grant Deed
610	020-040-40-01 E 1/2 OF SE 1/4 OF SE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 243)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
611	020-040-41-01 E 1/2 OF SW 1/4 OF SE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 241)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
612	020-040-43-01 W 1/2 OF SE 1/4 OF SW 1/4 OF NE 1/4 OF SW 1/4 & E 1/2 OF SW 1/4 OF SW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 237 & 238)	2	11	13	2.5	5/4/1973	52	1346	493		Deed
613	020-040-44-01 W 1/2 OF SW 1/4 OF SW 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 236)	2	11	13	1.25	12/1/1977	42	1409	925		Deed
614	020-040-45-01 E 1/2 OF SE 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 235)	2	11	13	1.25	2/6/1985	29	1535	1583		Tax Deed To Purchaser of Real Property
615	020-040-46-01 W 1/2 OF SE 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 234)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
616	020-040-47-01 E 1/2 OF SW 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 233)	2	11	13	1.25	5/10/1984	70	1521	965		Tax Deed To Purchaser of Real Property
617	020-040-52-01 W 1/2 OF NW 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 291)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
618	020-040-53-01 E 1/2 OF NW 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 290)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
619	020-040-54-01 W 1/2 OF NW 1/4 OF NE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 287)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
620	020-040-56-01 E 1/2 OF NE 1/4 OF NE 1/4 OF SW 1/4 OF SW 1/4 & W 1/2 OF NE 1/4 OF NE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOTS 284 & 285)	2	11	13	2.5	5/4/1973	52	1346	493		Deed
621	020-040-61-01 E 1/2 OF NE 1/4 OF SE 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 340)	2	11	13	1.25	3/11/1996	96005138	1840	49		QuitclaimDeed
622	020-040-62-01 E 1/2 OF SE 1/4 OF SE 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 371)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
623	020-040-66-01 E 1/2 OF SE 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 367)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
624	020-040-68-01 W 1/2 OF NE 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB	2	11	13	1.25	5/4/1973	52	1346	493		Deed

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
625	020-040-69-01 LOT 345) W 1/2 OF SE 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 366)	2	11	13	1.25	3/19/1990	90-4857	1644	743		Tax Deed To Purchaser of Real Property
626	020-040-70-01 E 1/2 OF SW 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 365)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
627	020-040-71-01 E 1/2 OF NW 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 346)	2	11	13	1.25	3/19/1990	90-4858	1644	745		Tax Deed To Purchaser of Real Property
628	020-040-73-01 W 1/2 OF SW 1/4 OF NW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 300)	2	11	13	1.25	12/18/1979	82	1444	1556		Tax Collector Deed
629	020-040-74-01 E 1/2 OF SE 1/4 OF NE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 299)	2	11	13	1.25	2/6/1985	30	1535	1585		Tax Deed To Purchaser of Real Property
630	020-040-75-01 W 1/2 OF SE 1/4 OF NE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 298)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
631	020-040-78-01 E 1/2 OF SE 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 295)	2	11	13	1.25	1/23/1976	30	1383	750		Deed
632	020-040-79-01 W 1/2 OF SE 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 294)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
633	020-040-80-01 E 1/2 OF SW 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 293)	2	11	13	1.25	10/18/1978	92	1423	1616		Deed
634	020-040-81-01 W 1/2 OF SW 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 292)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
635	020-040-83-01 E 1/2 OF NW 1/4 OF SW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 254)	2	11	13	1.25	3/19/1990	4858	1644	745		Tax Deed To Purchaser of Real Property
636	020-040-84-01 W 1/2 OF NE 1/4 OF SW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 353)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
637	020-040-86-01 W 1/2 OF NW 1/4 OF SE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 351)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
638	020-040-87-01 E 1/2 OF NW 1/4 OF SE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 350)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
639	020-040-88-01 W 1/2 OF NE 1/4 OF SE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 349)	2	11	13	1.25	2/20/1992	92003487	1692	1190		Corporation Grant Deed
640	020-040-90-01 W 1/2 OF NW 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 347)	2	11	13	1.25	1/25/2001	0101566	2043	1197		QuitclaimDeed
641	020-040-92-01 E 1/2 OF SE 1/4 OF SE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 363)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
642	020-040-95-01 W 1/2 OF SW 1/4 OF SE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 360)	2	11	13	1.25	12/18/1979	82	1444	1556		Tax Collector Deed
643	020-040-97-01 W 1/2 OF SE 1/4 OF SW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 358)	2	11	13	1.25	3/19/1990	90-4858	1644	745		Tax Deed To Purchaser of Real Property

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
644	020-040-98-01 E 1/2 OF SW 1/4 OF SW 1/4 OF SW 1/4 OF SW 1/4 & W 1/2 OF SW 1/4 OF SW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 356 & 357)	2	11	13	2.5	5/4/1973	52	1346	493		Deed
645	020-050-01-01 W 1/2 OF NW 1/4 OF NW 1/4 OF NW 1/4 OF SE 1/4 & W 1/2 OF SW 1/4 OF NW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 147 & 180)	2	11	13	2.5	5/4/1973	52	1346	493		Deed
646	020-050-02-01 E 1/2 OF NW 1/4 OF NW 1/4 OF NW 1/4 OF SE 1/4 (146)	2	11	13	1.25	11/12/1958	32	15-A	61		Collector's Deed
647	020-050-05-01 E 1/2 OF NE 1/4 OF NE 1/4 OF NW 1/4 OF SE 1/4; E 1/2 OF SE 1/4 OF NE 1/4 OF NW 1/4 OF SE 1/4; W 1/2 OF NE 1/4 OF NE 1/4 OF NW 1/4 OF SE 1/4 & W 1/2 OF SE 1/4 OF NE 1/4 OF NW 1/4 OF SE 1/4 (ARB LOTS 140, 141, 186, 187)	2	11	13	5	5/4/1973	52	1346	493		Deed
648	020-050-06-01 W 1/2 OF NW 1/4 OF NW 1/4 OF NE 1/4 OF SE 1/4 (ARB LOT 139)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
649	020-050-08-01 W 1/2 OF NE 1/4 OF NW 1/4 OF NE 1/4 OF SE 1/4 (ARB LOT 137)	2	11	13	1.25	2/29/1984	71	1517	1151		Tax Deed To Purchaser of Real Property
650	020-050-09-01 E 1/2 OF NE 1/4 OF NW 1/4 OF NE 1/4 OF SE 1/4 (ARB LOT 136)	2	11	13	1.25	2/29/1984	72	1517	1153		Tax Deed To Purchaser of Real Property
651	020-050-10-01 W 1/2 OF NW 1/4 OF NE 1/4 OF NE 1/4 OF SE 1/4 (ARB LOT 135)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
652	020-050-13-01 E 1/2 OF NE 1/4 OF NE 1/4 OF NE 1/4 OF SE 1/4 (ARB LOT 132)	2	11	13	1.25	12/1/1977	40	1409	921		Deed
653	020-050-20-01 W 1/2 OF SW 1/4 OF NW 1/4 OF NE 1/4 OF SE 1/4 (ARB LOT 188)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
654	020-050-21-01 E 1/2 OF SW 1/4 OF NE 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 185)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
655	020-050-23-01 E 1/2 OF SE 1/4 OF NW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 183)	2	11	13	1.25	2/29/1984	5	1521	971		Tax Deed To Purchaser of Real Property
656	020-050-26-01 W 1/2 OF NW 1/4 OF SW 1/4 OF NW 1/4 OF SE 1/4 & E 1/2 OF NW 1/4 OF SW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 210 & 211)	2	11	13	2.5	5/4/1973	52	1346	493		Deed
657	020-050-27-01 W 1/2 OF SW 1/4 OF SW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 244)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
658	020-050-28-01 E 1/2 OF SW 1/4 OF SW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 245)	2	11	13	1.25	11/3/1955	33	14-A	266		Collector's Deed
659	020-050-29-01 W 1/2 OF SE 1/4 OF SW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 246)	2	11	13	1.25	7/20/2001	16405	2071	1186		Grant Deed
660	020-050-31-01 NE 1/4 OF SW 1/4 OF NW 1/4 OF SE 1/4 (ARB LOTS 208 & 209)	2	11	13	2.5	7/20/2001	16405	2071	1186		Grant Deed
661	020-050-32-01 W 1/2 OF NW 1/4 OF SE 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 207)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
662	020-050-33-01 W 1/2 OF SW 1/4 OF SE 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 248)	2	11	13	1.25	3/11/1996	96005138	1840	49		QuitclaimDeed

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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
663	020-050-34-01 E 1/2 OF SW 1/4 OF SE 1/4 OF NW 1/4 OF SE 1/4 (ARB LOT 249)	2	11	13	1.25	3/11/1996	96005138	1840	49		Quitclaim Deed
664	020-050-52-01 E 1/2 OF NW 1/4 OF SW 1/4 OF SW 1/4 OF SE 1/4 (ARB LOT 338)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
665	020-050-53-01 W 1/2 OF NW 1/4 OF SW 1/4 OF SW 1/4 OF SE 1/4 (ARB LOT 339)	2	11	13	1.25	7/20/2001	16405	2071	1186		Grant Deed
666	020-050-54-01 W 1/2 OF SW 1/4 OF SW 1/4 OF SW 1/4 OF SE 1/4 (ARB LOT 372)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
667	020-050-56-01 E 1/2 OF SE 1/4 OF SW 1/4 OF SW 1/4 OF SE 1/4 (ARB LOT 375)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
668	020-050-75-01 E 1/2 OF SW 1/4 OF SW 1/4 OF SE 1/4 OF SE 1/4 (ARB LOT 381)	2	11	13	1.25	10/18/1978	92	1423	1616		Deed
669	020-050-76-01 W 1/2 OF SE 1/4 OF SW 1/4 OF SE 1/4 OF SE 1/4 (ARB LOT 382)	2	11	13	1.25	11/12/1958	37	15-A	66		Collector's Deed
670	020-050-79-01 E 1/2 OF SW 1/4 OF NW 1/4 OF NE 1/4 OF SE 1/4; W 1/2 OF SE 1/4 OF NW 1/4 OF NE 1/4 OF SE 1/4 (ARB LOTS 189 & 190)	2	11	13	2.5	3/9/1987	3467	1576	826		Tax Deed To Purchaser of Real Property
671	020-050-80-01 E 1/2 OF SW 1/4 OF SW 1/4 OF SW 1/4 OF SE 1/4 (ARB LOT 373)	2	11	13	1.25	5/4/1973	52	1346	493		Deed
672	020-050-82-01 SE 1/4 OF NE 1/4 OF SE 1/4; E 1/2 OF E 1/2 OF SW 1/4 OF NE 1/4 OF SE 1/4; PORTION OF N 1/2 OF SE 1/4 OF SE 1/4 (ARB LOTS 196, 197, 198, 199, 256, 257, 258, 259, 200, 255, 260, 261, 262, 263, 264)	2	11	13	21.25	7/20/2001	2001-16405	2071	1186		Grant Deed
673	020-060-05-01 W 1/2 OF SW 1/4 OF NE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 21)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
674	020-060-22-01 E 1/2 OF NE 1/4 OF NE 1/4 OF NE 1/4 OF SW 1/4 (ARB LOT 1)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
675	020-060-33-01 E 1/2 OF NE 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 41)	12	11	13	1.25	12/29/1994	94031288	1794	406		Grant Deed
676	020-060-34-01 W 1/2 OF NE 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 42)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
677	020-060-35-01 E 1/2 OF NW 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 43)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
678	020-060-36-01 W 1/2 OF NW 1/4 OF SE 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 44)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
679	020-060-38-01 E 1/2 OF NW 1/4 OF SW 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 47)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
680	020-060-41-01 E 1/2 OF SW 1/4 OF SW 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 50)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
681	020-060-42-01 E 1/2 OF SE 1/4 OF SW 1/4 OF NW 1/4 OF SW 1/4 (ARB LOT 52)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
682	020-070-25-01 E 1/2 OF SW 1/4 OF NW 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 82)	12	11	13	1.25	12/18/1979	82	1444	1556		Deed

EXHIBIT D-1
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APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
683	020-070-40-01 W 1/2 OF SE 1/4 OF SE 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 127)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
684	020-070-44-01 E 1/2 OF SW 1/4 OF SW 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 122)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
685	020-070-47-01 W 1/2 OF SE 1/4 OF SE 1/4 OF SW 1/4 OF SW 1/4 (ARB LOT 119)	12	11	13	1.25	11/2/1993	93026260	1749	1653		Tax Deed To Purchaser of Real Property
686	020-070-64-01 W 1/2 OF SW 1/4 OF SE 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 125)	12	11	13	1.25	5/4/1973	52	1346	493		Deed
687	020-070-65-01 E 1/2 OF SW 1/4 OF SE 1/4 OF SE 1/4 OF SW 1/4 (ARB LOT 126)	12	11	13	1.25	5/4/1973	52	1346	496		Deed
688	020-090-01-01 ALL	19	11	13	640	5/7/1938	21	482	422		Deed
689	020-090-02-01 ALL	20	11	13	640	2/4/1938	55-64	479	520-524		Collector's Deed
690	020-090-03-01 N 1/2 & SW 1/4 & N 1/2 OF SE 1/4 & SW 1/4 OF SE 1/4; SE 1/4 OF SE 1/4	21	11	13	640	5/7/1938	21	482	422	ALSO REF: #6, 04/07/1938, 486-221	Deed & Warranty Deed
691	020-090-04-01 NW 1/4; SE 1/4; NE 1/4	28	11	13	476	10/23/1930	35	292	206	ALSO REF: #24, 01/15/1936, 417-272; #22, 01/15/1936, 418-36	Grant Deed & Quitclaim Deed
692	020-090-06-01 SW 1/4	28	11	13	160	12/7/1929	24	255	113	ALSO REF: #21, 11/26/35, 415-29; #51, 01/08/1936, 416-128	Grant Deed & Collector's Deed
693	020-090-07-01 ALL	29	11	13	640	5/7/1938	21	482	422		Deed
694	020-090-08-01 LOTS 5 & 6, EXCEPT W 8.27 ACRES & E 1/2 OF SW 1/4; SE 1/4 NW 1/4; NE 1/4	30	11	13	631.73	11/26/1935	26	415	26	ALSO REF: #21, 10/27/1936, 444-239; #30, 11/09/1936, 443-498; #16, 08/02/1937, 460-483	Grant Deed/QC Deed
695	020-090-09-01 W 8.27 ACRES OF LOTS 5 & 6	30	11	13	8.27	11/26/1935	26	415	26		Grant Deed
696	020-100-04-01 NW 1/4	23	11	13	160	5/7/1938	21	482	422		Deed
697	020-100-23-01 SE 1/4 OF NE 1/4	27	11	13	40	10/27/1976	164	1393	1312		Deed
698	020-100-32-01 ALL	22	11	13	640	1/6/1936	104-111	417	204-211	ALSO REF: #140-143, 04/16/1934, 375/360-363; #131-133, 01/03/1934, 374/573-575; #81-82, 09/28/1932, 348/490-491; #19, 09/28/32, 348/428; #52-56, 02/18/1931, 301/15-19; #87-100, 02/18/1931, 301/50-63; #73-74, 04/10/1940, 3A/1-2; #21, 11/24/1942, 598-89	Quitclaim Deed; Collector's Deed; Conveyance of Real Estate
699	020-100-42-01 PART OF SECTION 27, BEING DESIGNATED AS PARCEL 1 OF COC LLA #125 (1998/535)	27	11	13	288.4	10/15/1940	156	559	63	ALSO REF: #21, 04/05/1944, 617-249; #164, 10/27/1976, 1393-1312	Grant Deed; Deed
700	020-110-01-01 ALL	31	12	13	640	5/7/1938	21	482	422		Deed

EXHIBIT D-1
(IID IMPERIAL COUNTY)

APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
701 020-110-02-01	NW 1/4; N 1/2 OF NE 1/4	32	11	13	240	2/19/1931	65 - 66	301	28 - 29	ALSO REF: #101, 01/06/1936, 417-201 & #36, 11/09/1936, 443-502	Conveyance of Real Estate; Collector's Deed; Quitclaim Deed
702 020-110-03-01	S 1/2 OF NE 1/4 & N 1/2 OF SE 1/4	32	11	13	160	9/28/1945	38	13-A	72		Collector's Deed
703 020-110-04-01	SW 1/4	32	11	13	160	4/16/1934	136 - 138	375	356 - 358	ALSO REF: #36-37, 02/14/1938, 479/510-511; #12, 01/12/1939, 514/172; #29, 02/15/1965, 1201- 456; #30-31, 04/03/1970, 1290/1192-1193	Conveyance of Real Estate; Collector's Deed; Quitclaim Deed
704 020-110-05-01	SW 1/4 OF SE 1/4	32	11	13	40	1/15/1936	27	417	275		QuitclaimDeed
705 020-110-09-01	W 1/2 OF NW 1/4	33	11	13	80	5/7/1938	21	482	422		Deed
706 020-110-10-01	E 1/2 OF NW 1/4	33	11	13	80	4/16/1934	130	375	350		Conveyance of Real Estate
707 020-110-19-01	NW 1/4 OF NW 1/4 (aka LOT 6) & SW 1/4 OF NW 1/4, BEING SHOWN AS COC #130	5	12	13	121.61	5/7/1938	21	482	422		Deed
708 020-110-20-01	LOTS 3 & 4	6	12	13	81	1/7/1935	71	394	520		Collector's Deed
709 020-110-21-01	SE 1/4 OF NW 1/4 & LOTS 5, 6 & 7	6	12	13	169.3	1/7/1935	75	394	524		Collector's Deed
710 020-110-22-01	SE 1/4 OF NE 1/4; SW 1/4 OF NE 1/4	6	12	13	80	1/7/1935	72 - 73	394	521 - 522		Collector's Deed
711 020-110-52-01	N 1/2 OF SE 1/4 (aka PARCEL 2 OF CERTIFICATE OF COMPLIANCE LOT LINE ADJUSTMENT #126	6	12	13	80	8/8/1989	89012673-4	1629	1430- 1432		Grant Deed
712 020-110-53-01	LOTS 8 & 9 & E 1/2 OF SW 1/4; SE 1/4 OF SE 1/4 & SW 1/4 OF SE 1/4, (aka PARCEL 3 OF CERTIFICATE OF COMPLIANCE LOT LINE ADJUSTMENT #126	6	12	13	248.3	3/19/1931	67 - 76	301	30 - 39	ALSO REF: #73-74, 09/28/1932, 348/482-483; #125 & 134, 01/03/1934, 374-567 & 578; #58-60, 04/18/1934, 375/278-280;	Conveyance of Real Estate
713 020-130-20-01	PART OF SECTION 7, BEING SHOWN AS PARCEL 1 OF COC LLA #127 (1998-555)	7	12	13	342	3/7/1938	21	482	422	ALSO REF: #24, 07/02/1956, 947/100; #2, 07/05/1956, 947/187; #2001-00205, 01/05/2001, 2041/292	Deed, Executor's Quitclaim Deed, Quitclaim Deed, Grant Deed

EXHIBIT D-2
(IID RIVERSIDE COUNTY)

	APN	LEGAL DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	DOC TYPE	
1	725-170-003	PART OF N 1/2	31	7	10	46.25	3/7/1938	21	482	422	Deed	
2	725-170-004	PART OF N 1/2	31	7	10	116.05	3/7/1938	21	482	422	Deed	
3	725-170-005	PART OF N 1/2	31	7	10	102.04	3/7/1938	21	482	422	Deed	
4	725-170-006	PART OF N 1/2	31	7	10	51.50	3/7/1938	21	482	422	Deed	
5	725-210-006	PART OF NW 1/4	33	7	10	21.25	3/7/1938	21	482	422	Deed	
6	725-210-007	PART OF NW 1/4	33	7	10	58.75	3/7/1938	21	482	422	Deed	
7	725-210-009	PART OF NE 1/4	33	7	10	25.45	3/7/1938	21	482	422	Deed	
8	725-210-010	PART OF NW 1/4	33	7	10	38.94	3/7/1938	21	482	422	Deed	
9	725-210-011	PART OF NW 1/4	33	7	10	41.86	3/7/1938	21	482	422	Deed	
10	725-210-012	PART OF NE 1/4	33	7	10	45.56	3/7/1938	21	482	422	Deed	
11	725-210-013	PART OF NE 1/4	33	7	10	49.97	3/7/1938	21	482	422	Deed	
12	725-220-001	S 1/2	33	7	10	320	3/7/1938	21	482	422	Deed	
13	729-110-030	PART OF S 1/2, BEING SHOWN AS PARCEL 7929-1 ON RECORD OF SURVEY MAP (103-75)	29	7	9	159.11	1/29/1988	031474			Grant Deed	
14	729-120-010	SW 1/4 OF SW 1/4	27	7	9	40	3/7/1938	21	482	422	Deed	
15	729-150-020	PART OF SE 1/4, DAF: BEG AT THE NE CORNER OF SD SE 1/4 OF SECTION 31 ACCORDING TO MAP ON FILE IN BOOK 103, PAGE 100 OF RECORDS OF SURVEY OF RIVERSIDE COUNTY; TH SLY ALONG THE E LINE OF SD SE 1/4 TO THE SE CORNER OF SD SE 1/4; TH WLY ALONG THE S LINE OF SD SE 1/4 TO A 1-INCH IRON PIPE, TAGGED LS-4230, MARKING THE SW CORNER OF SD SE 1/4; TH ALONG HTE W LINE OF SD SE 1/4 N 00°03'18" W, 1346.52 FEET TO A 1-1/2 INCH IRON PIPE TAGGED LS-5397 THEREON; TH DEPARTING FROM SAID W LINE N 89°56'42" E, 1351.67 FT TO A 1-1/2 INCH PIPE TAGGED LS-5397; TH N 00° 30' 40" W, 283.74 FT TO A 1 1/2 INCH IRON PIPE TAGGED LS-5397; TH N 89° 29' 20" E 262.09 FT TO A 1 1/2 INCH IRON PIPE TAGGED LS-5397; TH N 00° 30' 40" W 1093.50 FT, MORE OR LESS, TO THE POINT OF INTERSECTION WITH THE N LINE OF SAID SE 1/4 OF SECTION 31, SAID POINT BEING MARKED WITH A 1- 1/2 INCH IRON PIPE TAGGED LS 5397; TH N 89° 28' 20" E 1033.45 FT ALONG SAID NORTH LINE OF SAID SE 1/4 OF SECTION 31 TO THE TRUE POINT OF BEGINNING, SAID DESCRIBED LAND BEING SHOWN AND DELINEATED AS IMPERIAL IRRIGATION DISTRICT RIGHT-OF-WAY PARCEL 7931-11 MAP AND ON FILE IN BOOK 103, PAGE 100 OF RECORDS A SURVEY OF RIVERSIDE COUNTY	And	7	9	106.66	5/28/1998	215937				Grant Deed
16	729-170-006	PART OF N 1/2	35	7	9	287.75	3/7/1938	21	482	422	Deed	
17	733-220-010	S 1/2 OF LOT 1 OF NW 1/4; SW 1/4; LOT 2 OF NW 1/4 & NW 1/4 OF SE 1/4 & S 1/2 OF SE 1/4, LYING SWLY OF SALTON SEA SHORELINE	19	8	11	344.11	3/7/1938	21	482	422	Deed	
18	733-220-013	PART OF SE 1/4, EXCEPT PART LYING SWLY OF SALTON SEA SHORELINE	19	8	11	60.45	3/7/1938	21	482	422	Deed	
19	733-270-004	ALL	31	8	11	640	3/7/1938	21	482	422	Deed	
20	733-270-023	SW 1/4 OF NE 1/4; W 1/2; SE 1/4; SE 1/4 OF NE 1/4	29	8	11	410.7	3/7/1938	21	482	422	Deed	
21	733-270-026	W 1/2	33	8	11	337.8	3/7/1938	21	482	422	Deed	
22	733-270-027	SW 1/4 OF NE 1/4; NW 1/4 OF SE 1/4; S 1/2 OF SE 1/4	33	8	11	142.2	3/7/1938	21	482	422	Deed	
23	735-020-001	ALL	5	8	10	512.96	3/7/1938	21	482	422	Deed	
24	735-020-002	ALL	7	8	10	640.06	3/7/1938	21	482	422	Deed	
25	735-020-003	N 1/2; W 1/2 OF SW 1/4	9	8	10	400	3/7/1938	21	482	422	Deed	
26	735-020-004	E 1/2 OF SW 1/4; SE 1/4	9	8	10	240	3/7/1938	21	482	422	Deed	
27	735-020-005	ALL	17	8	10	640	3/7/1938	21	482	422	Deed	
28	735-020-006	NE 1/4 OF NW 1/4	16	8	10	40	3/8/1962	21729	3093	78	Patent	
29	735-040-017	PART OF NE 1/2, EXCEPT N 27.60 ACRES OF W 1/2 OF NE 1/4 CONVEYED BY SP LAND CO TO DATE PALM BEACH CORPORATION LTD BY DEED NO 3248-R DATED JUNE 24, 1930; DAF: BEG AT THE NE COR OF THE NE 1/4 OF SD SECTION; TH S 800 FT ALONG THE E LINE OF NE 1/4 TO A POINT, SAID POINT	3	8	10	3.62	3/7/1938	21	482	422	Deed	

EXHIBIT D-2
(IID RIVERSIDE COUNTY)

APN	LEGAL DESCRIPTION	SECTION	T	R	ACRES	REG_DATE	DOC_NO	BOOK	PAGE	DOC TYPE	
30	735-040-18	BEING THE TRUE POB; TH DEPARTING THE E LINE AT AN ANGLE POINT TO THE SOUTH LINE OF SAID NE 1/4, WHICH LIES 600 FT W OF THE SE COR OF THE NE 1/4; TH E 600 FT TO THE SE COR OF NE 1/4; TH N TO POB; EXCEPT PART LYING NORTH OF SALTON SEA SHORELINE	3	8	10	1.77	3/7/1938	21	482	422	Deed
		PART OF NE 1/2, EXCEPT N 27.60 ACRES OF W 1/2 OF NE 1/4 CONVEYED BY SP LAND CO TO DATE PALM BEACH CORPORATION LTD BY DEED NO 3248-R DATED JUNE 24, 1930; DAF: BEG AT THE NE COR OF THE NE 1/4 OF SD SECTION; TH S 800 FT ALONG THE E LINE OF NE 1/4 TO A POINT, SAID POINT BEING THE TRUE POB; TH DEPARTING THE E LINE AT AN ANGLE POINT TO THE SOUTH LINE OF SAID NE 1/4, WHICH LIES 600 FT W OF THE SE COR OF THE NE 1/4; TH E 600 FT TO THE SE COR OF NE 1/4; TH N TO POB; EXCEPT PART LYING SOUTH OF SALTON SEA SHORELINE									
31	735-050-003	PART OF SE 1/4, BEING THAT PART LYING E OF A LINE DAF: BEG AT THE NE 1/4 COR; TH W 800 FT A POINT; TH S AT AN ANGLE POINT TO THE SW COR OF SAID SE 1/4	3	8	10	98.07	3/7/1938	21	482	422	Deed
32	735-050-010	E 1/2 OF SE 1/4 OF SW 1/4	3	8	10	20	6/25/1987	181197			Corp Grant Deed
33	735-170-005	NW 1/4	13	8	10	137.68	3/7/1938	21	482	422	Deed
34	735-170-006	NW 1/4	13	8	10	22.32	3/7/1938	21	482	422	Deed
35	735-180-001	SW 1/4 OF SE 1/4	13	8	10	40	3/7/1938	21	482	422	Deed
36	735-180-006	N 1/2 OF SW 1/4; SE OF SW 1/4; PART OF NW 1/4 OF SE 1/4; S 1/2 OF SE 1/4	13	8	10	230.64	3/7/1938	21	482	422	Deed
37	735-180-007	PART OF NW 1/4 OF SE 1/4	13	8	10	9.59	3/7/1938	21	482	422	Deed
38	735-190-001	ALL	19	8	10	639.52	3/7/1938	21	482	422	Deed
39	735-190-002	ALL	21	8	10	640	3/7/1938	21	482	422	Deed
40	735-190-003	ALL	29	8	10	640	3/7/1938	21	482	422	Deed
41	735-190-004	E 1/2; W 1/2	27	8	10	640	3/7/1938	21	482	422	Deed
42	735-190-005	NW 1/4; W 1/2 OF SW 1/4	25	8	10	240	3/7/1938	21	482	422	Deed
43	735-190-006	E 1/2; E 1/2 OF SW 1/4	25	8	10	400	3/7/1938	21	482	422	Deed
44	735-190-007	N 1/2 OF LOT 1 OF NW 1/4; LOT 2 OF NW 1/4; N 1/2 OF LOT 2 OF SW 1/4	31	8	10	120	3/7/1938	21	482	422	Deed
45	735-190-008	E 1/2; S 1/2 OF LOT 1 OF NW 1/4; S 1/2 OF LOT 2 OF SW 1/4; LOT 1 OF SW 1/4	31	8	10	480	3/7/1938	21	482	422	Deed
46	735-190-009	ALL	33	8	10	640.88	3/7/1938	21	482	422	Deed
47	735-190-010	ALL	35	8	10	643.30	3/7/1938	21	482	422	Deed
48	737-020-008	ALL	9	8	9	640	3/7/1938	21	482	422	Deed
49	737-020-013	ALL	5	8	9	267.57	3/7/1938	21	482	422	Deed
50	737-020-014	ALL	5	8	9	225.59	3/7/1938	21	482	422	Deed
51	737-020-015	NE 1/4 OF NE 1/4; S 1/2 OF NE 1/4; PART OF SE 1/4, EXCEPT E 9.10 ACRES	7	8	9	270.99	3/7/1938	21	482	422	Deed
52	737-020-016	E 9.10 ACRES OF SE 1/4	7	8	9	9.10	3/7/1938	21	482	422	Deed
53	737-030-001	FRACTIONAL	3	8	9	510.62	6/17/1998	246307			Corp Grant Deed
54	737-030-002	FRACTIONAL	1	8	9	509.12	4/9/1989	150292			Grant Deed
55	737-030-003	ALL	11	8	9	640	3/7/1938	21	482	422	Deed
56	737-060-001	ALL	17	8	9	170.06	3/7/1938	21	482	422	Deed
57	737-060-006	ALL	17	8	9	312.73	3/7/1938	21	482	422	Deed
58	737-060-007	ALL	17	8	9	0.37	3/7/1938	21	482	422	Deed
59	737-060-008	ALL	17	8	9	98.73	3/7/1938	21	482	422	Deed
60	737-060-009	ALL	17	8	9	58.11	3/7/1938	21	482	422	Deed
61	737-070-001	ALL	15	8	9	640	3/7/1938	21	482	422	Deed
62	737-070-002	ALL	13	8	9	640	3/7/1938	21	482	422	Deed
63	737-070-003	ALL	23	8	9	640	3/7/1938	21	482	422	Deed
64	737-150-001	N 1/2	21	8	9	168.54	3/7/1938	21	482	422	Deed

EXHIBIT D-2
(IID RIVERSIDE COUNTY)

	APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	DOC TYPE
65	737-150-004	N 1/2	21	8	9	9.57	3/7/1938	21	482	422	Deed
66	737-150-005	N 1/2	21	8	9	141.88	3/7/1938	21	482	422	Deed
67	737-160-021	SE 1/4	21	8	9	20.9	3/7/1938	21	482	422	Deed
68	737-160-022	SE 1/4	21	8	9	132.53	3/7/1938	21	482	422	Deed
69	737-210-014	NE 1/4 OF NE 1/4	28	8	9	31.31	9/15/1995	305040			Quitclaim Deed
70	737-210-015	NE 1/4 OF NE 1/4	28	8	9	8.39	9/15/1995	305040			Quitclaim Deed
71	737-210-016	SE 1/4 OF NE 1/4	28	8	9	18.28	9/15/1995	305040			Quitclaim Deed
72	737-210-017	SE 1/4 OF NE 1/4	28	8	9	22.42	9/15/1995	305040			Quitclaim Deed
73	737-230-002	ALL	27	8	9	485	3/7/1938	21	482	422	Deed
74	737-230-003	ALL	25	8	9	640	3/7/1938	21	482	422	Deed
75	737-230-004	ALL	35	8	9	643.3	3/7/1938	21	482	422	Deed
76	737-230-012	ALL	27	8	9	155	3/7/1938	21	482	422	Deed
77	737-230-013	ALL	27	8	9	1.35	3/7/1938	21	482	422	Deed

EXHIBIT D-3
(IID & CVWD)

	APN	LEGAL_DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK	PAGE	SUBDIVISION_TRACT	DOC TYPE
1	001-342-06-01	LOT 20, BLOCK 7					10/2/1995	95021731	1823	274	SALTON SEA BEACH UNIT NO. 4	Grant Deed
2	001-345-02-01	LOT 7, BLOCK 3	23	9	9		12/19/1994	94030439	1792	1680	SALTON SEA BEACH ESTATES UNIT # 4	Grant Deed
3	001-345-08-01	LOT 3, BLOCK 3	23	9	9		8/12/1994	94019031	1779	996	TRACT 538, SALTON SEA BEACH ESTATES UNIT #4	Grant Deed
4	001-345-09-01	LOT 4, BLOCK 3	23	9	9		12/22/1994	824	1793	883	SALTON SEA BEACH ESTATES UNIT # 4	Grant Deed
5	001-351-01-01	LOT 21, BLOCK 11	23	9	9		12/23/1994	94030880	1793	1051	SALTON SEA BEACH ESTATES UNIT # 4	Grant Deed
6	001-354-18-01	LOTS 18 & 19, BLOCK 3	23	9	9		9/10/1996	96021324	1861	329	SALTON SEA BEACH	Grant Deed
7	001-361-04-01	LOTS 11, 12, 13, 40, 41 & 42, BLOCK 12	23	9	9		12/23/1994	94030871	1793	1010	SALTON SEA BEACH	Grant Deed
8	001-361-07-01	LOTS 50, 51 & 52, BLOCK 12	23	9	9		10/2/1995	95021730	1823	270	SALTON SEA BEACH	Grant Deed
9	001-361-09-01	LOTS 34 THRU 39, BLOCK 12	23	9	9		12/19/1994	94030436	1792	1666	SALTON SEA BEACH	Grant Deed
10	001-361-10-01	LOTS 9, 10 & 43, BLOCK 12	23	9	9		12/22/1994	94030828	1793	899	SALTON SEA BEACH	Grant Deed
11	001-361-11-01	LOT 44, BLOCK 12	23	9	9		4/9/1999	99007876	1971	1183	SALTON SEA BEACH	Grant Deed
12	001-361-13-01	LOTS 1 THRU 8, BLOCK 12	23	9	9		2/20/1987	87-02526	1575	594	SALTON SEA BEACH	Tax Deed To Purchaser of Tax-Defaulted Property
13	001-362-21-01	LOTS 2, 3, 4, BLOCK 13	23	9	9		9/10/1996	96021324	1861	329 & 330	SALTON SEA BEACH	Grant Deed/QC Deed
14	001-372-02-01	LOT, 5, BLOCK 1	23	9	9		12/22/1994	94030822	1793	875	SALTON SEA BEACH ESTATES UNIT # 4	Grant Deed
15	001-373-02-01	LOT 2, BLOCK 2	23	9	9		12/22/1994	94030826	1793	891	SALTON SEA BEACH UNIT NO. 4	Grant Deed
16	001-373-03-01	LOT 3, BLOCK 2	23	9	9		12/22/1994	94030826	1793	891	SALTON SEA BEACH UNIT NO. 4	Grant Deed
17	001-383-14-01	LOT 17, BLOCK 8	23	9	9		12/23/1994	94030872	1793	1014	SALTON SEA BEACH	Grant Deed
18	001-383-15-01	LOT 16, BLOCK 8	23	9	9		12/23/1994	94030872	1793	1014	SALTON SEA BEACH	Grant Deed
19	001-383-21-01	LOT 10, BLOCK 8	23	9	9		12/19/1994	94030434	1792	1658	SALTON SEA BEACH	Grant Deed
20	001-383-27-01	LOT 4, BLOCK 8	23	9	9		12/23/1994	94030875	1793	1027	SALTON SEA BEACH	Grant Deed
21	001-385-23-01	LOT 14, BLOCK 16	23	9	9		9/10/1996	96021324	1861	329	SALTON SEA BEACH	QC Deed
22	001-391-09-01	LOT 22, BLOCK 9	23	9	9		12/29/1994	94031276	1794	318	SALTON SEA BEACH	Grant Deed
23	001-391-10-01	LOT 21, BLOCK 9	23	9	9		12/29/1994	94031276	1794	318	SALTON SEA BEACH	Grant Deed
24	001-391-16-01	LOT 15, BLOCK 9	23	9	9		12/19/1994	94030442	1792	1694	SALTON SEA BEACH	Grant Deed
25	001-391-17-01	LOT 14, BLOCK 9	23	9	9		12/19/1994	94030442	1792	1694	SALTON SEA BEACH	Grant Deed
26	001-391-32-01	LOTS 12 & 13, BLOCK 9	23	9	9		06/30/1994	94015273	1774	1327	SALTON SEA BEACH	Grant Deed
							06/30/1994	94015275	1774	1331		
							06/30/1994	94015276	1774	1333		
							06/30/1994	94015282	1774	1354		
27	001-393-03-01	BLOCKS 29 & 30, BLOCK 18, EXCEPT S 50 FT	23	9	9		12/23/1994	94030886	1793	1077	SALTON SEA BEACH	Grant Deed
28	001-394-07-01	LOT 24, BLOCK 19	23	9	9		12/22/1994	94030823	1793	879	SALTON SEA BEACH	Grant Deed
29	002-263-01-01	LOT 165, BLOCK E	33	9	12		12/22/1994	94030829	1793	903	BOMBAY BEACH	Grant Deed
30	002-263-32-01	LOTS 141 THRU 160, INCLUSIVE, BLOCK E	33	9	12		12/23/1994	94030882	1793	1059	BOMBAY BEACH	Grant Deed
31	002-264-22-01	LOT 204, BLOCK E	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
32	002-264-23-01	LOT 203, BLOCK E	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
33	002-264-24-01	LOT 202, BLOCK E	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
34	002-264-25-01	LOT 201, BLOCK E	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
35	002-264-26-01	LOT 200, BLOCK E	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
36	002-264-27-01	LOT 199, BLOCK E	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
37	002-264-28-01	LOT 198, BLOCK E	33	9	12		12/22/1994	94030825	1793	887	BOMBAY BEACH	Grant Deed

EXHIBIT D-3
(IID & CVWD)

#	APN	LEGAL DESCRIPTION	SECTION	T	R	ACRES	REC_DATE	DOC_NO	BOOK#	PAGE#	SUBDIVISION TRACT	DOC TYPE
38	002-264-29-01	LOT 197, BLOCK E	33	9	12		12/22/1994	94030825	1793	887	BOMBAY BEACH	Grant Deed
39	002-264-30-01	LOTS 196, BLOCK E,	33	9	12		12/22/1994	94030825	1793	887	BOMBAY BEACH	Grant Deed
40	002-264-31-01	LOTS 205, 206, 207, 208, 209 & 210, BLOCK E,	33	9	12		12/19/1994	94030441	1792	1688	BOMBAY BEACH	Grant Deed
41	002-271-06-01	LOT 40, BLOCK F	33	9	12		12/23/1994	94030873	1793	1018	BOMBAY BEACH	Grant Deed
42	002-271-07-01	LOT 39, BLOCK F	33	9	12		12/23/1994	94030873	1793	1018	BOMBAY BEACH	Grant Deed
43	002-271-27-01	LOT 19, BLOCK F,	33	9	12		12/23/1994	94030877	1793	1036	BOMBAY BEACH	Grant Deed
44	002-271-28-01	LOT 18, BLOCK F	33	9	12		12/23/1994	94030874	1793	1022	BOMBAY BEACH	Grant Deed
45	002-272-06-01	LOT 100, BLOCK F	33	9	12		12/22/1994	94030827	1793	895	BOMBAY BEACH	Grant Deed
46	002-272-09-01	LOT 97, BLOCK, F	33	9	12		12/23/1994	94030887	1793	1081	BOMBAY BEACH	Grant Deed
47	002-272-18-01	LOT 88, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
48	002-272-19-01	LOT 87, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
49	002-272-20-01	LOT 86, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
50	002-272-21-01	LOT 85, BLOCK F	33	9	12		9/28/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
51	002-272-22-01	LOT 84, BLOCK F	33	9	12		12/23/1994	94030883	1793	1063	BOMBAY BEACH	Grant Deed
52	002-272-24-01	LOTS 82, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
53	002-272-25-01	LOTS 81, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
54	002-272-26-01	LOTS 80, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
55	002-272-31-01	LOTS 89 & 90, BLOCK F	33	9	12		9/29/1995	95021586	1822	1705	BOMBAY BEACH	Grant Deed
56	002-273-25-01	LOT 141, BLOCK F	33	9	12		12/22/1994	94030820	1793	867	BOMBAY BEACH	Grant Deed
57	002-274-20-01	LOT 206, BLOCK F	33	9	12		9/29/1995	95021587	1822	1714	BOMBAY BEACH	Quitclaim Deed Grant Deed
								95021589	1822	1718		
58	002-281-12-01	LOTS 3, 4 & 5, BLOCK G	33	9	12		12/23/1994	94030873	1793	1018	BOMBAY BEACH	Grant Deed
59	002-285-14-01	LOT 58, BLOCK G	33	9	12		9/10/1996	96021324	1861	329	BOMBAY BEACH	Quitclaim Deed
60	002-285-26-01	LOT 60, BLOCK G	33	9	12		12/19/1994	94030435	1792	1662	BOMBAY BEACH	Grant Deed
61	002-286-15-01	LOTS 94 THRU 97, BLOCK G	33	9	12		12/23/1994	94030870	1793	1006	BOMBAY BEACH	Grant Deed
62	002-287-26-01	LOT 80, 81, 82, 83, 84 & 85, BLOCK G	33	9	12		12/23/1994	94030873	1793	1018	BOMBAY BEACH	Grant Deed
63	002-291-17-01	LOT 9, BLOCK H,	33	9	12		12/23/1994	94030881	1793	1055	BOMBAY BEACH	Grant Deed
64	002-291-28-01	LOT 21 & 22, BLOCK H,	33	9	12		12/19/1994	94030437	1792	1670	BOMBAY BEACH	Grant Deed
65	002-292-19-01	LOTS 28 & 29, BLOCK H,	33	9	12		9/10/1996	96021324	1861	329	BOMBAY BEACH	Quitclaim Deed
66	002-293-04-01	LOT 65, BLOCK H,	33	9	12		9/20/1995	95020607	1821	940	BOMBAY BEACH	Grant Deed
67	002-293-30-01	LOT 67, BLOCK H,	33	9	12		12/19/1994	94030438	1792	1675	BOMBAY BEACH	Grant Deed
68	002-294-17-01	LOTS 80, 81 & 82, BLOCK H,	33	9	12		12/23/1994	94030873	1793	1018	BOMBAY BEACH	Grant Deed
69	002-303-08-01	LOT 136, BLOCK H,	33	9	12		12/23/1994	94030873	1793	1018	BOMBAY BEACH	Grant Deed
70	002-303-26-01	LOT 118, BLOCK H,	33	9	12		12/23/1994	94030876	1793	1031	BOMBAY BEACH	Grant Deed
71	002-304-22-01	LOT 167, BLOCK H,	33	9	12		1/19/1995	95001242	1796	110	BOMBAY BEACH	Grant Deed
72	020-040-28-01	W 1/2 OF THE SW 1/4 OF THE NW 1/4 OF THE NW 1/4 OF THE SW 1/4 (ARB LOT 164)	2	11	13	1.25	12/19/1994	94030444	1792	1709		Grant Deed
73	020-040-31-01	W 1/2 OF THE NE 1/4 OF THE SW 1/2 OF NW 1/4 OF THE SW 1/4 (ARB LOT 225)	2	11	13	1.25	12/23/1994	94030885	1793	1073		Grant Deed
74	020-040-93-01	W 1/2 OF THE SE 1/4 OF THE SE 1/4 OF THE SW 1/4 OF THE SW 1/4 (ARB LOT 362)	2	11	13	1.25	11/1/1994	94026124	1788	253		Quitclaim Deed

Exhibit E

EXHIBIT E

**IID LAND DEPICTED ON MAP
(PARAGRAPH 3-a)**

[TO BE INSERTED]

Exhibit F

EXHIBIT F

LANDS IN FEE TITLE THAT LIE BELOW 220-FOOT ELEVATION

PARCEL NO. 1

The West 29.94 acres of the East 100.95 acres of the North half of the North half of Section 32, Township 7 South, Range 10 East, San Bernardino Meridian, in the County of Riverside, State of California, according to the official plat thereof.

EXCEPTING therefrom that portion lying South of the Salton Sea shoreline.

Containing 20.31 acres, more or less.

Assessor's Parcel No. 725-190-018

PARCEL NO. 2

That portion of the Northwest quarter of Section 36, Township 7 South, Range 9 East, San Bernardino Meridian, lying northwesterly of the Salton Sea shoreline.

EXCEPTING therefrom those portions in street.

Containing 136.23 acres, more or less.

Assessor's Parcel No. 729-170-012

PARCEL NO. 3

That portion of the Northeast quarter of Section 36, Township 7 South, Range 9 East, San Bernardino Meridian, lying northerly of the Salton Sea shoreline.

EXCEPTING therefrom those portions in street.

Containing 58.89 acres, more or less.

Assessor's Parcel No. 729-170-017

PARCEL NO. 4

The North 50.0 acres of the East half of the Southeast quarter of Section 29, Township 7 South, Range 9 East, San Bernardino Meridian, according to the official plat thereof.

Containing 50.0 acres, more or less.

Assessor's Parcel No. 729-110-009

EXHIBIT F – Continued

PARCEL NO. 5

The South 30.0 acres of the East half of the Southeast quarter of Section 29, Township 7 South, Range 9 East, San Bernardino Meridian, according to the official plat thereof.

Containing 30.0 acres, more or less.

Assessor's Parcel No. 729-110-018

PARCEL NO. 6

The South 120.0 feet of the Southwest quarter of the Northeast quarter of Section 28, Township 8 South, Range 9 East, San Bernardino Meridian.

Containing 3.64 acres, more or less.

Assessor's Parcel No. 737-210-011

PARCEL NO. 7

Lots 14 and 15, Block "F," Bombay Beach Tract, according to Map No. 317 on file in the Office of the County Recorder of Imperial County.*

Containing 0.25 acre (2 lots at 135.0 feet by 40.0 feet), more or less.

Assessor's Parcel Nos. 002-251-16 and 002-261-17

PARCEL NO. 8

The West 29.94 acres of the East 100.95 acres of the North half of the North half of Section 32, Township 7 South, Range 10 East, San Bernardino Meridian, in the County of Riverside, State of California, according to the official plat thereof.

EXCEPTING therefrom that portion lying North of the Salton Sea shoreline.

Containing 9.63 acres, more or less.

Assessor's Parcel No. 725-190-019

*This land is within Imperial County.

EXHIBIT F – Continued

PARCEL NO. 9

The North half of Section 33, Township 7 South, Range 9 East, San Bernardino Meridian, in the County of Riverside, State of California, according to the official plat thereof.

EXCEPTING that portion lying North and West of the Salton Sea shoreline.

Containing 95.08 acres, more or less.

Assessor's Parcel No. 729-160-007

PARCEL NO 10

The South half of Section 33, Township 7 South, Range 9 East, San Bernardino Meridian, in the County of Riverside, State of California, according to the official plat thereof.

EXCEPTING that portion lying West of the Salton Sea shoreline.

Containing 201.17 acres, more or less.

Assessor's Parcel No. 729-160-008

PARCEL NO. 11

The South half of Section 35, Township 7 South, Range 9 East, San Bernardino Meridian.

EXCEPTING therefrom that portion lying northerly of the Salton Sea shoreline.

Containing 318.17 acres, more or less.

Assessor's Parcel No. 729-170-009

PARCEL NO. 12

That portion of the Northeast quarter of Section 36, Township 7 South, Range 9 East, San Bernardino Meridian, lying southerly of the Salton Sea shoreline.

Containing 107.54 acres, more or less.

Assessor's Parcel No. 729-170-016

EXHIBIT F - Continued

PARCEL NO. 13

That portion of the Northwest quarter of Section 36, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

BEGINNING at the Southeast corner of said Northwest quarter;

THENCE westerly along the South line of the Northwest quarter of said Section 36 to the Southwest corner of said Section 36;

THENCE northerly along the West line of said Section 36 to the intersection with the Salton Sea shoreline;

THENCE northeasterly along said shoreline to the East line of said Northwest quarter;

THENCE southerly along said East line of the Northwest quarter to the POINT OF BEGINNING.

Containing 23.07 acres, more or less.

Assessor's Parcel No. 729-170-015

PARCEL NO. 14

The South half of Section 36, Township 7 South, Range 9 East, San Bernardino Meridian.

EXCEPTING therefrom that portion lying northerly of the Salton Sea shoreline.

Containing 319.92 acres, more or less.

Assessor's Parcel No. 729-170-018

PARCEL NO. 15

The South half of Section 31, Township 7 South, Range 10 East, San Bernardino Meridian.

Containing 320.0 acres, more or less.

Assessor's Parcel No. 725-180-001

EXHIBIT F - Continued

PARCEL NO. 16

The Northeast quarter of the Northeast quarter of Section 32, Township 7 South, Range 9 East, San Bernardino Meridian, according to the official plat thereof.

Containing 40.0 acres, more or less.

Assessor's Parcel Nos. 729-150-010 and 729-150-011

PARCEL NO. 17

Lot 45, Block "F," Bombay Beach Tract, in an unincorporated area of the County of Imperial, State of California, according to Map No. 317 on file in the office of the County Recorder of Imperial County. *

Containing 0.12 acre (135 feet by 40 feet), more or less.

Assessor's Parcel No. 002-271-01

PARCEL NO. 18

That portion of the Northeast quarter of Section 29, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The West 90.00 feet and the South 90.00 feet of the Northeast quarter of said Section 29.

Containing 10.38 acres, more or less.

Assessor's Parcel No. 729-110-022

PARCEL NO. 19

That portion of the Northeast quarter of the Northeast quarter of the Southeast quarter of Section 30, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The West 120.00 feet of the East 150.00 feet of said portion of the Southeast quarter.

Containing 1.82 acres, more or less.

Assessor's Parcel No. 729-100-010

*This land is within Imperial County.

EXHIBIT F - Continued

PARCEL NO. 20

That portion of the East half of the Northeast quarter of Section 29, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The West 60.00 feet of the East 120.00 feet of said portion of the Northeast quarter.

Containing 3.50 acres, more or less.

Assessor's Parcel No. 729-110-023

PARCEL NO. 21

A parcel of land in the South half of Section 30, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

BEGINNING at the Southeast corner of the South half of Section 30, Township 7 South, Range 9 East, San Bernardino Meridian;

THENCE South $89^{\circ}23'18''$ West along the South line of said South half, a distance of 671.80 feet;

THENCE northwesterly along the arc of a curve concave to the left whose tangent bears North $50^{\circ}25'22''$ West, having a radius of 19,400.00 feet, through a central angle of $06^{\circ}53'16''$, a distance of 2,332.16 feet to a point of tangent;

THENCE North $57^{\circ}18'38''$ West, a distance of 98.76 feet to the West line of the Southeast quarter of said Section 30 at a point 1,448.66 feet North of the Southwest corner;

THENCE continuing North $57^{\circ}18'38''$ West, a distance of 1,060.00 feet to a point of curve;

THENCE continuing northwesterly along the arc of a curve concave to the right having a radius of 3,600.00 feet, through a central angle of $15^{\circ}38'57''$, a distance of 983.27 feet to the North line of said South half of Section 30 at a point 710.32 feet East of the Northwest corner;

THENCE North $89^{\circ}34'46''$ East along said North line, a distance of 871.87 feet;

THENCE southeasterly along the arc of a curve concave to the left whose tangent bears South $52^{\circ}42'24''$ East, having a radius of 3,000.00 feet, through a central angle of $04^{\circ}36'14''$, a distance of 241.06 feet to a point of tangent;

EXHIBIT F – Continued

THENCE South 57°18'38" East, a distance of 671.99 feet to the West line of the said Southeast quarter of Section 30 at a point 506.69 feet South of the Northwest corner;

THENCE continuing South 57°18'38" East, a distance of 486.77 feet to a point of curve;

THENCE following the arc of a curve concave to the right, having a radius of 20,000.00 feet through a central angle of 07°58'19", a distance of 2,782.73 feet to the East line of said South half of Section 30;

THENCE South 00°01'47" East along said East line, a distance of 211.41 feet to the POINT OF BEGINNING.

Containing 61.71 acres, more or less.

Assessor's Parcel No. 729-100-009

PARCEL NO. 22

A portion of the Northwest quarter of Section 34, Township 7 South, Range 10 East, San Bernardino Meridian, described as follows:

BEGINNING at the center of said Section, thence along the South line of the Northwest quarter of said Section, North 89°58'10" West, 204.54 feet to the northerly right-of-way line of the Southern Pacific Railroad Company;

THENCE along said Northerly right-of-way line, North 39°48'45" West, 633.28 feet;

THENCE along a line that is perpendicular to said northerly right-of-way line, North 50°11'15" East, 450.00 feet to a line that is parallel with and 450.00 feet northeasterly from (as measured at right angles) said northerly right-of-way line;

THENCE along said parallel line South 39°48'45" East, 404.32 feet to the East line of said Northwest quarter of Section 34;

THENCE along said East line of the Northwest quarter of Section 34, South 00°40'33" East, 464.14 feet to the POINT OF BEGINNING.

Containing 6.29 acres, more or less.

Assessor's Parcel No. 723-220-003

EXHIBIT F – Continued

PARCEL NO. 23

A portion of the Northeast quarter and a portion of the Southeast quarter of Section 34, Township 7 South, Range 10 East, San Bernardino Meridian, described as follows:

BEGINNING at the Southwest corner of said Northeast quarter;

THENCE South 00°45'24" East, along the West line of said Southeast quarter, 49.75 feet;

THENCE North 38°54'06" East, 332.70 feet;

THENCE North 39°53'36" West, 336.41 feet to a point on the West line of said Northeast quarter;

THENCE South 00°45'24" East, along the West line of said Northeast quarter, 467.32 feet to the POINT OF BEGINNING.

Containing 1.26 acres, more or less.

Assessor's Parcel Nos. 723-230-001 and 723-240-006

PARCEL NO. 24

Lots 61, 62, 63 and 64 in Block 1 of Date Palm Beach Unit No. 1 as shown by map on file in Book 18, Page 9 of Maps, Records of Riverside County, California

Containing 0.46 acre, more or less.

Assessor's Parcel Nos. 723-261-008, 723-261-009 and 723-261-020

PARCEL NO. 25

Lots 119, 120, 121 and 122 of Date Palm Beach Unit No. 1 as shown by map on file in Book 18, Page 9 of Maps, Records of Riverside County, California.

Containing 0.46 acre, more or less.

Assessor's Parcel Nos. 773-262-008, 773-262-009 and 773-262-010.

PARCEL NO. 26

Lots 175 and 176 in Block 1 of Date Palm Beach, as shown by map on file in Book 18, Page 9 of Maps, Records of Riverside County, California.

Containing 0.23 acre, more or less.

Assessor's Parcel Nos. 773-263-009 and 773-263-010

TOTAL ACREAGE OF 1,820.66 ACRES, MORE OR LESS

THIS MAP IS FOR
ASSESSMENT PURPOSES ONLY

T-211 P.007/026 F-645

+808 684 8583

FROM-Redwine & Sherrill

10:30

OCT-01-03

1" = 400'

DATE	OLD No	NEW No
6/21	1	12, 13
"	2	14, 15
"	3	16, 17
"	4	18, 19
"	5	20, 21
"	6	22, 23
"	7	24-25
"	8	26-27
"	9	28, 29
6/21	10	30, 31

Data: Gov's Plat
Twp. N. 08
A A General Com. Section Maps

NOV. 1956

ASSESSOR'S MAP BK. 725 PG. 19
RIVERSIDE COUNTY, CALIF
SK

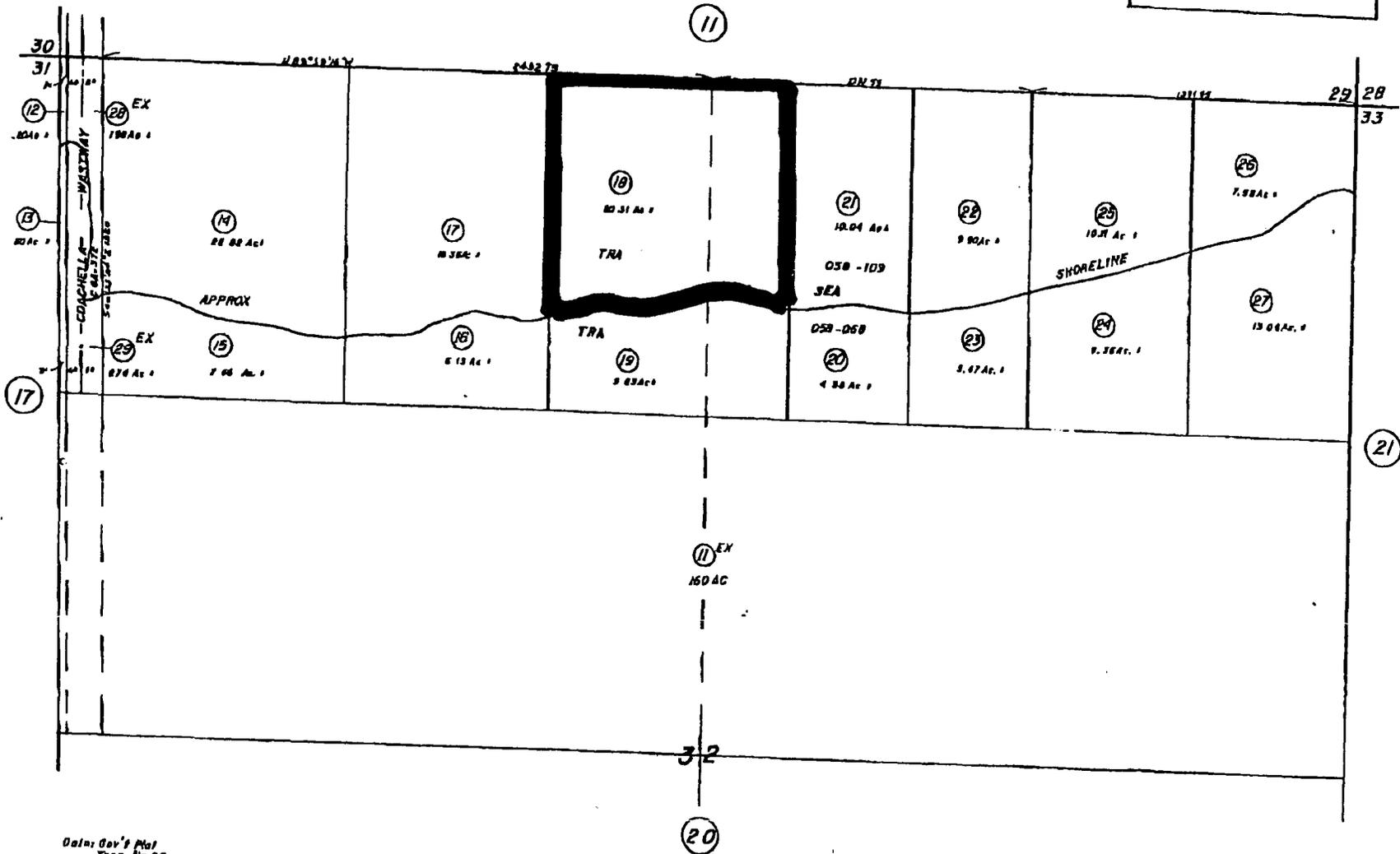


EXHIBIT "F-1"
Parcel Maps
Parcels 1-26

PARCEL 1

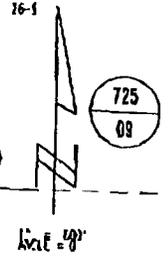
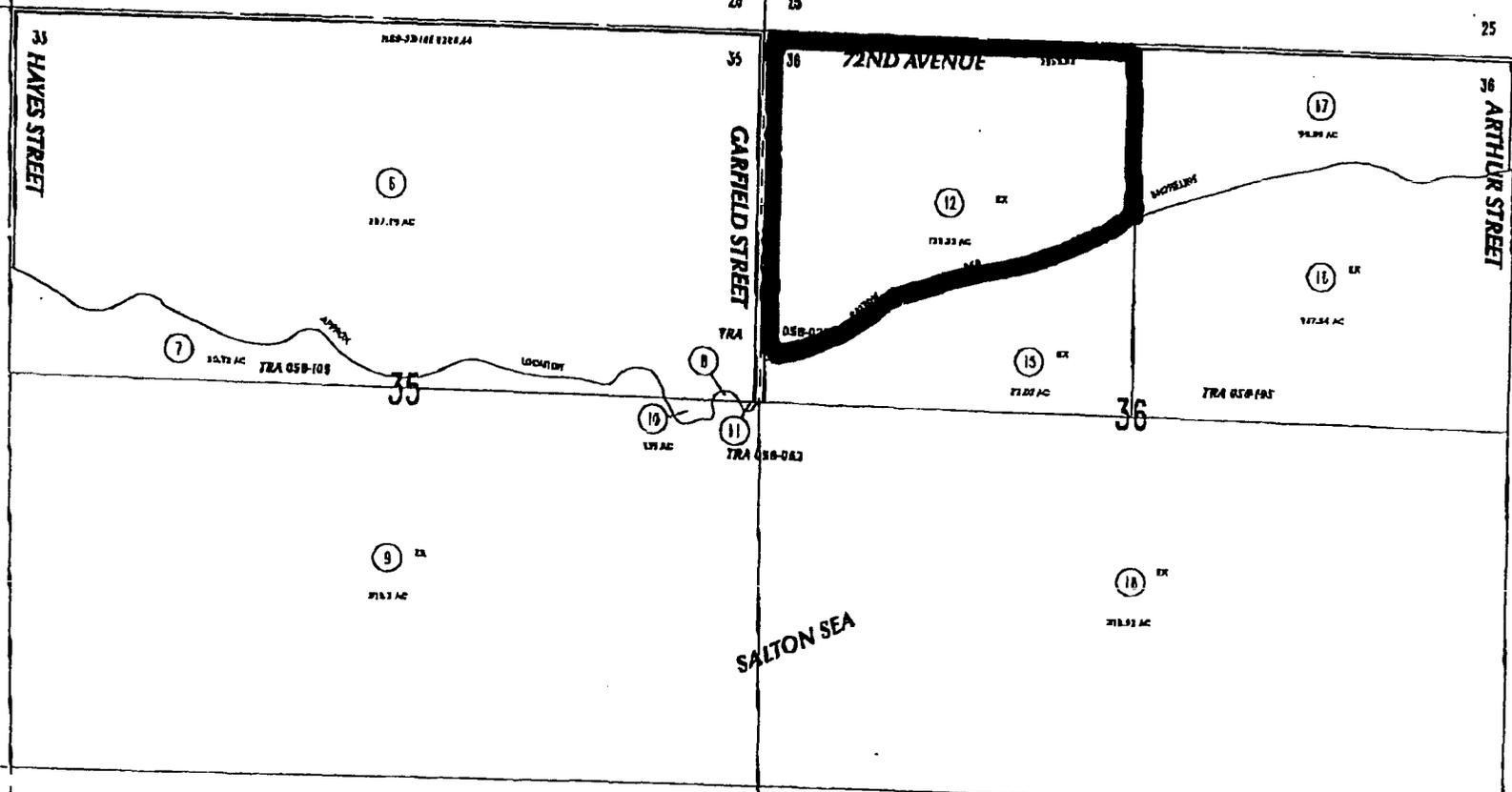
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCEL MAY NOT COMPLY WITH LOCAL ZONING OR BUILDING CODE ORDINANCES.

SEC. 35 36 T. 7S., R. 9E

T.R.A. 058-021
058-105
058-063

729-17

OCT-01-03 10:30 FROM-Redwine & Sherrill +809 884 9583 T-211 P.008/026 F-645



725
17

725
18

735
02

737
03

SALTON SEA (1-17)

ASSESSOR'S MAP BK729 PG. 17
Riverside County, Calif.

ABB

APR 05 2001
Map 2031

MAP	OLD NUMBER	NEW NUMBER
05/01	1	1-1
05/01	2	2-1
05/01	3	3-1
05/01	4	4-1
05/01	5	5-1
05/01	6	6-1
05/01	7	7-1
05/01	8	8-1
05/01	9	9-1
05/01	10	10-1
05/01	11	11-1
05/01	12	12-1
05/01	13	13-1
05/01	14	14-1
05/01	15	15-1
05/01	16	16-1
05/01	17	17-1
05/01	18	18-1
05/01	19	19-1
05/01	20	20-1

PARCEL 2

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO WARRANTY IS MADE FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCEL MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

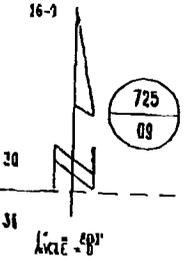
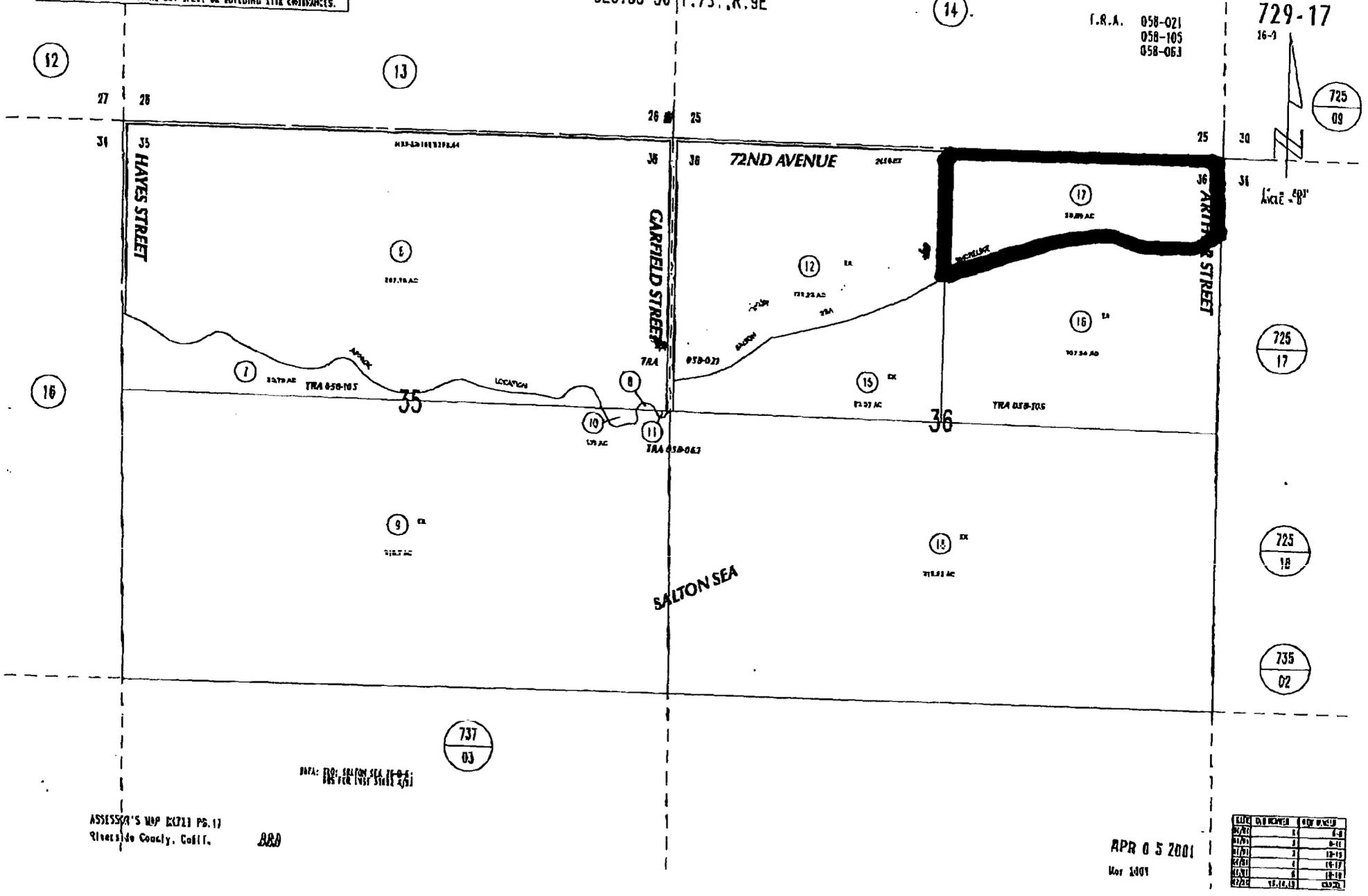
SEC. 35 36 T. 7S., R. 9E

14

F.R.A. 058-021
058-105
058-063

729-17

OCT-01-03 10:30 FROM-Redwine & Sherrill +909 684 8663 T-211 P.009/026 F-645



725 09

725 17

725 18

735 02

737 03

DATA: FROM SALTON SEA TO 0-5
FOR THE 72ND STREET 2-5

ASSESSOR'S MAP (K72) PG. 17
Placer County, Calif.

BBB

APR 05 2001
Map 2001

DATE	BY	REVISION	REV
01-01	BBB	1	1-01
01-01	BBB	2	1-01
01-01	BBB	3	1-01
01-01	BBB	4	1-01
01-01	BBB	5	1-01
01-01	BBB	6	1-01

PARCEL 3

17 582 Miles

POR. BOMBAY BEACH TRACT

W 1/2 SEC 33 T. 9 S., R. 12 E.

OM 5-39

Tax Area Code
58-002

2-25

F-645

P. 013/026

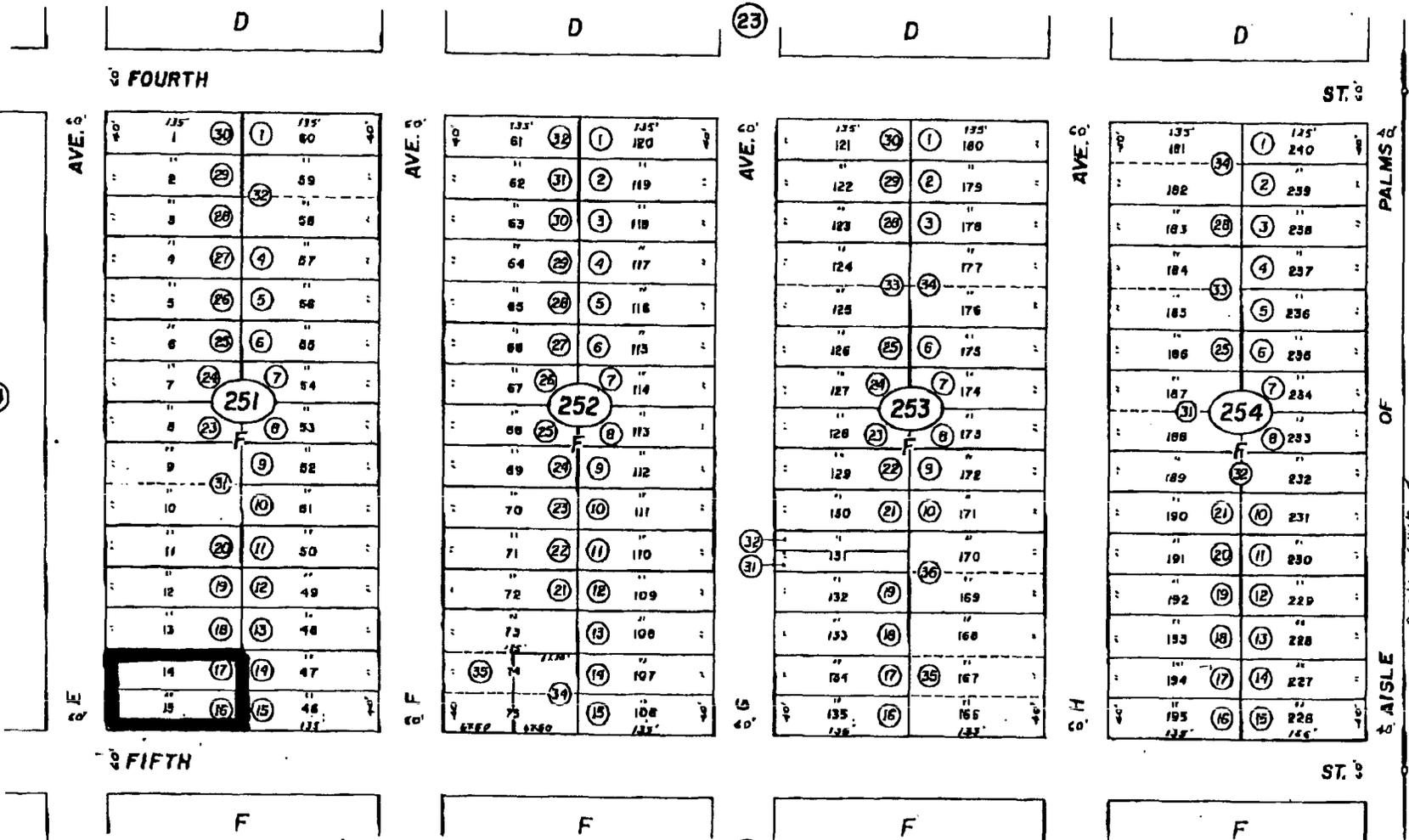
T-211

+908 684 9583

FROM-Redwine & Sherrill

10:31

OCT-01-03



4-28-94 LS
4-6-93 RM
4-4-89 RM
1-16-85 LS
3-1-85 LS

CODAMAP, a product of BIT INCORPORATED

DISCLAIMER:
THIS IS NOT AN OFFICIAL MAP.
THIS MAP WAS CREATED FOR THE IMPERIAL COUNTY
ASSessor, FOR THE SOLE PURPOSE OF AIDING IN
THE RECORDING OF THE OFFICE OF THE ASSessor,
AND DOES NOT CONSTITUTE IN THIS MAP ARE NOT
THE RESPONSIBILITY OF THE COUNTY OF IMPERIAL
OR THE ASSessor. (REV. & TAX. CODE SEC. 311)

27

DISCLAIMER:
THIS IS NOT AN OFFICIAL MAP.
THIS MAP WAS CREATED FOR THE IMPERIAL COUNTY
ASSessor, FOR THE SOLE PURPOSE OF AIDING IN
THE RECORDING OF THE OFFICE OF THE ASSessor,
AND DOES NOT CONSTITUTE IN THIS MAP ARE NOT
THE RESPONSIBILITY OF THE COUNTY OF IMPERIAL
OR THE ASSessor. (REV. & TAX. CODE SEC. 311)

NOTE - Assessor's Block Numbers Shown in Ellipses.
Assessor's Parcel Numbers Shown in Circles.

Assessor's Map Bk. 2 - Pg. 25
County of Imperial, Calif.

AUG 23 1994

PARCEL 7

725-19

26-11

T.R.A 058-068
058-109

N1/2 SEC. 32, T7S, R10E

THIS MAP IS FOR
ASSESSMENT PURPOSES ONLY

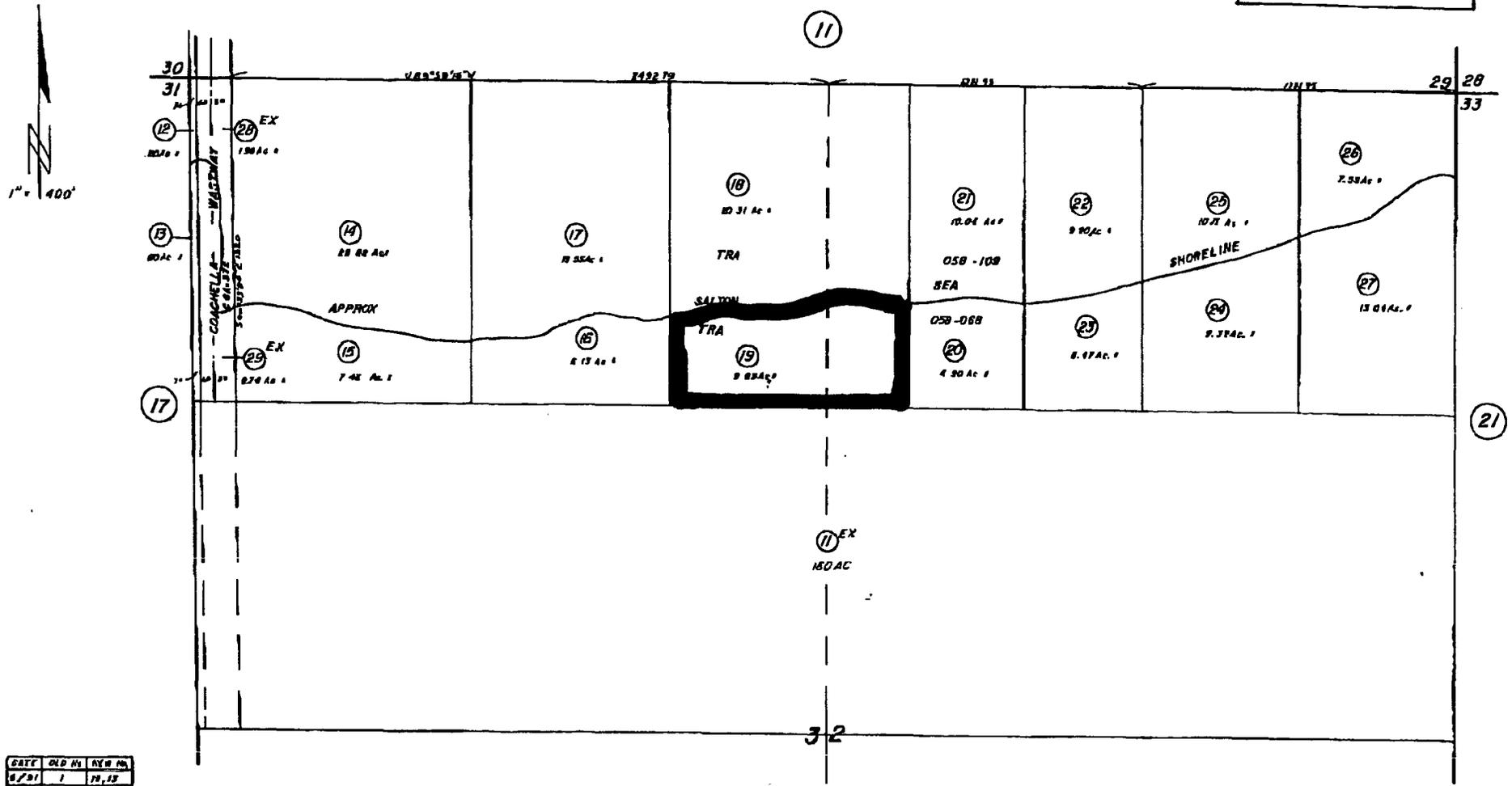
T-211 P.017/026 F-645

+808 684 9583

FROM Redwine & Sherrill

10:31

OCT-01-03



DATE	OLD NO.	NEW NO.
8/91	1	19, 18
"	2	14, 13
"	3	14, 17
"	4	14, 13
"	5	14, 17
"	6	14, 17
"	7	14, 17
"	8	14, 17
"	9	14, 17
8/91	10	14, 17

Date: Gov't Plat
Tops No. 89
A A Coal Contention Maps

NOV. 1966

ASSESSOR'S MAP BK. 725 PG. 19
RIVERSIDE COUNTY, CALIF.
51

PARCEL 8

OCT-01-03 10:31 FROM-Redwine & Sherrill +909 684 9583 T-211 P.020/026 F-645

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSIGNED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCEL MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

SEC.35 36 T.7S., R.9E

14

T.R.A. 058-021
058-105
058-063

729-17
26-9

725
09

1/2" = 8'

725
17

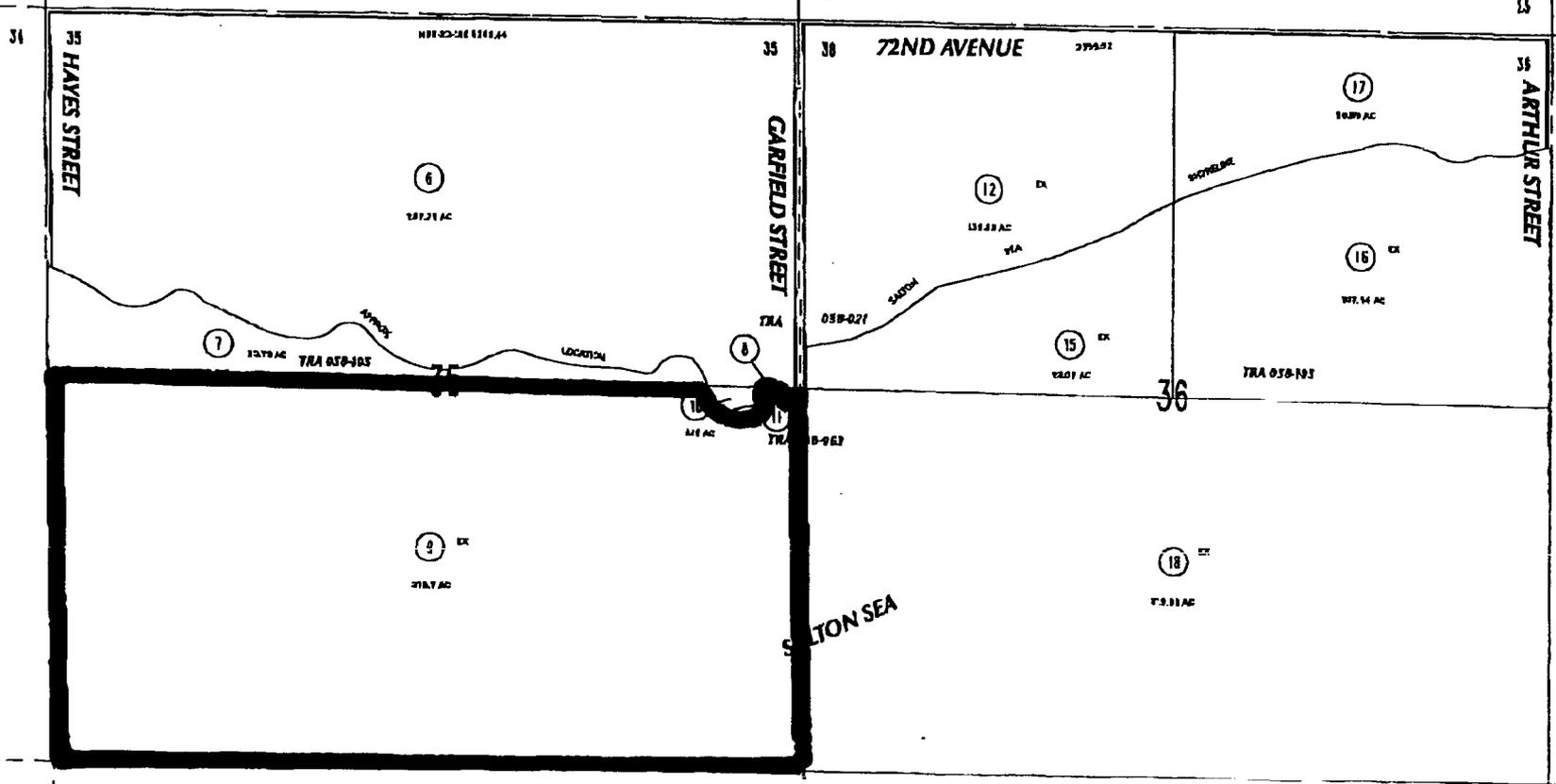
725
18

735
02

737
03

DATE	DESCRIPTION	BY
12/11/00	1	6-1
12/11/00	2	6-11
12/11/00	3	12-11
12/11/00	4	12-11
12/11/00	5	12-11
12/11/00	6	12-11
12/11/00	7	12-11

APR 05 2001
MAY 2001



WELL: 000 SALTON STA 36-1-1-1
FOR THE YEAR 1999 (7/1)

ASSESSOR'S MAP BK729 PG.17
Riverside County, Calif. *DBB*

PARCEL 11

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO WARRANTY IS ASSURED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT & BUILDING SITE ORDINANCES.

SEC. 35 36 T. 7S., R. 9E

14

T.R.A. 058-021
058-805
058-063

729-17

T-211 P.021/026 F-645

+909 684 9583

FROM-Redwine & Sherrill

10:31

OCT-01-03

12

13

27 28

28 25

25 30

35 HAYES STREET

72ND AVENUE

36 ARTHUR STREET

CARFIELD STREET

SALTON SEA

6 117.18 AC

12 118.25 AC

17 118.7 AC

16

7 113.7 AC

10 1.8 AC

8

11 774 058-063

15 87.55 AC

16 127.84 AC

725 17

9 118.7 AC

18 119.34 AC

725 18

737 03

DATE: 01/01/2003 11:31:13 AM

ASSESSOR'S MAP BK129 PG. 17
Sierra de County, Calif.

BBB

APR 05 2001
Mer 2001

CLASS	PER VALUE	LEV VALUE
01/01	1	0-2
02/01	2	0-11
03/01	3	12-21
04/01	4	22-31
05/01	5	32-41
06/01	6	42-51
07/01	7	52-61
08/01	8	62-71
09/01	9	72-81



725 09

PARCEL 12

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCEL MAY NOT COMPLY WITH LOCAL COV-57114 OR ZONING SIDE ORDINANCES.

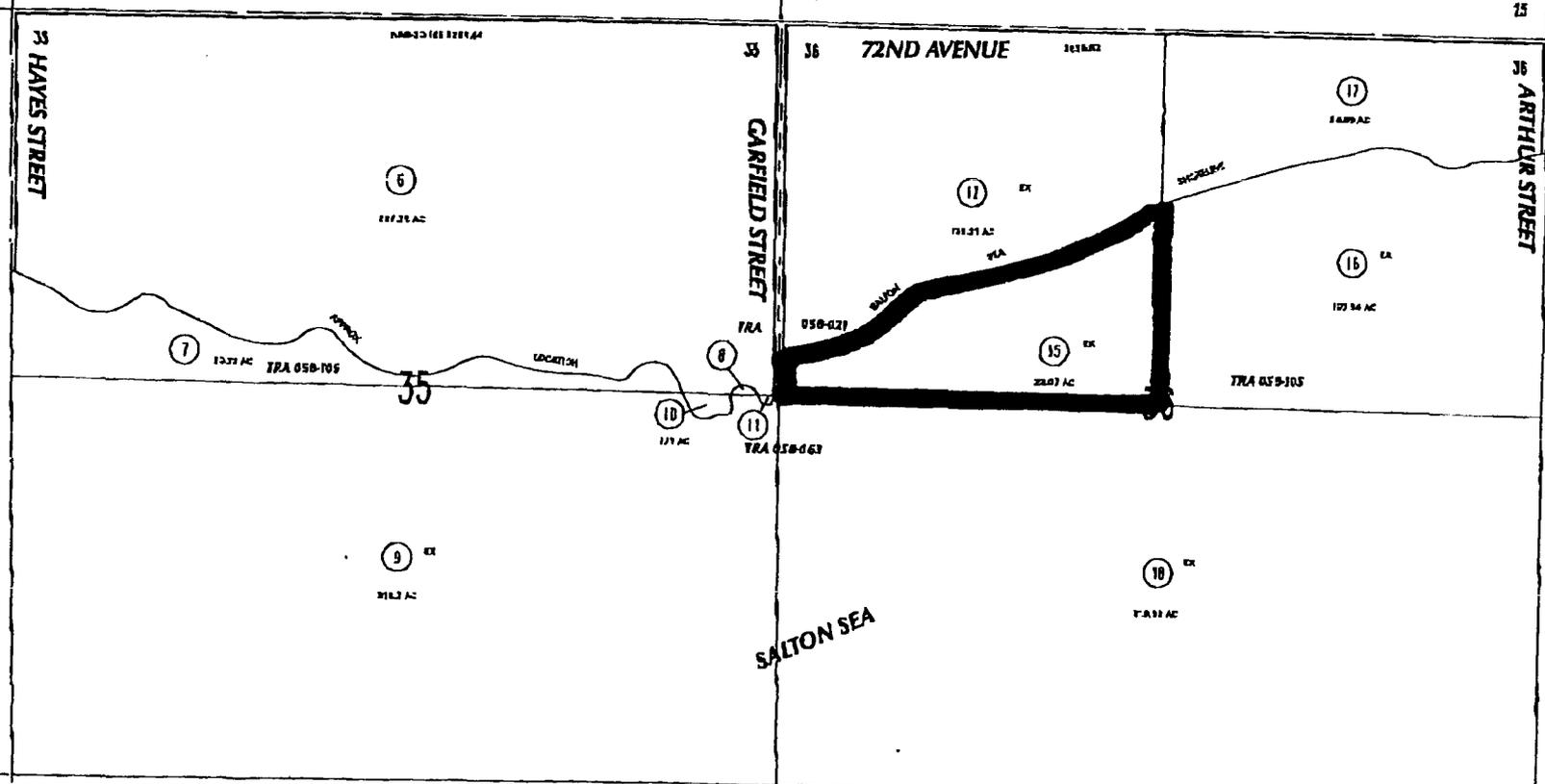
SEC. 35 36 T. 7S., R. 9E

(14)

T.R.A. 058-021
058-105
058-063

729-17
21-5

OCT-01-03 10:31 FROM-Redwine & Sherrill +808 684 9583 T-211 P. 022/026 F-645



725
17

725
18

735
02

737
03

ASSESSOR'S MAP 729 17.17
Riverside County, Calif.

ASD

APR 05 2001
Mar 2001

DATE	OLD MAP#	NEW MAP#
07/01	1	6-2
07/01	2	7-11
08/01	3	12-13
09/01	4	14-17
10/01	5	18-19
11/01	6	20-21
12/01	7	22-23

PARCEL 13

12.582 Miles

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSURED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT CORRELATE WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.

SEC. 35 36 T. 7S., R. 9E

14

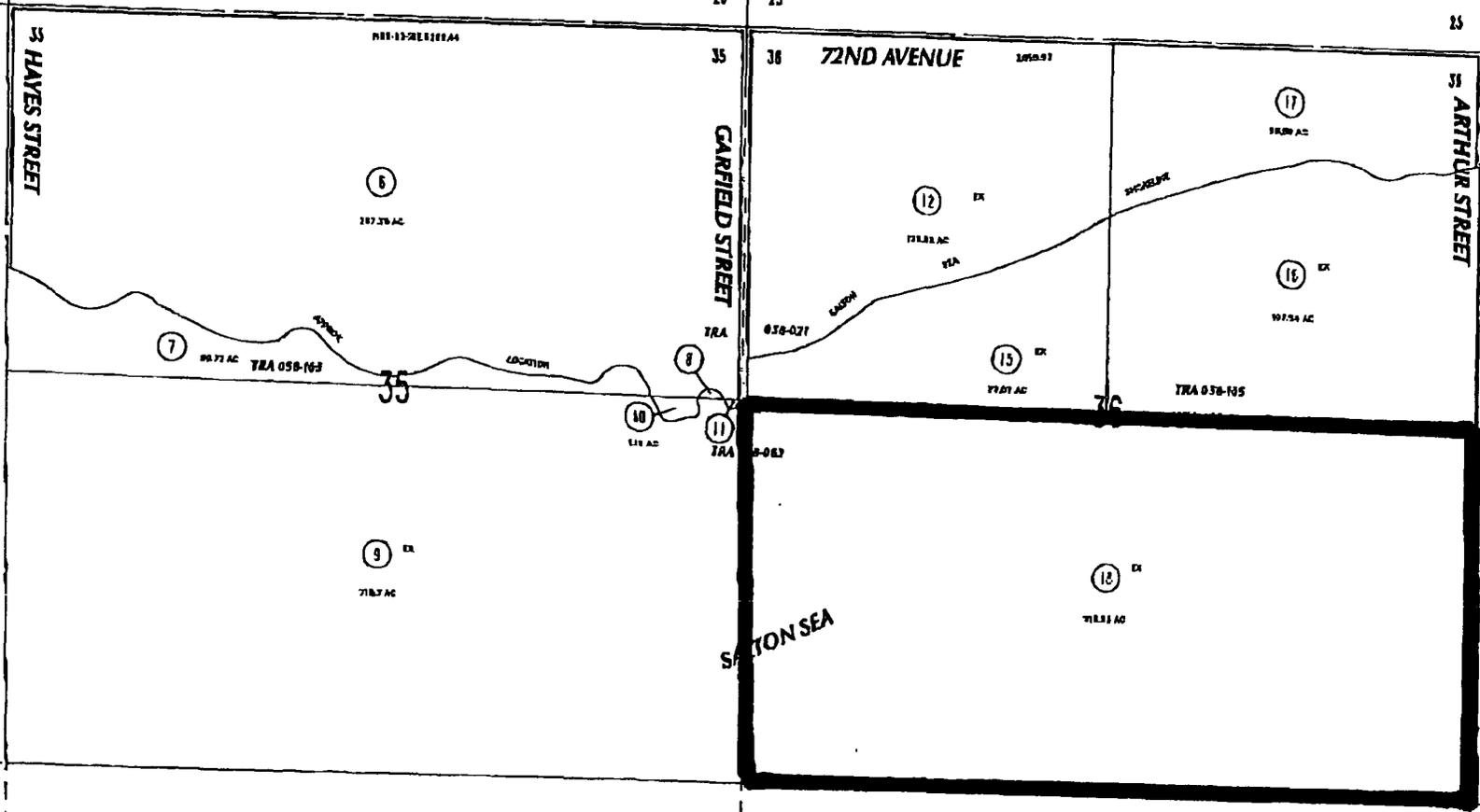
T.R.A. 058-021
058-105
058-063

729-17

26-9

725
09

OCT-01-03 10:32 FROM-Redwine & Sherrill +809 684 8663 T-211 P.029/026 F-645



1/2" = 80'

725
17

725
18

735
02

737
03

DATA: GIS: SHI TO: STATE: 1/1/01

ASSESSOR'S MAP K021 PG. 17
Riverside County, Calif.

BBB

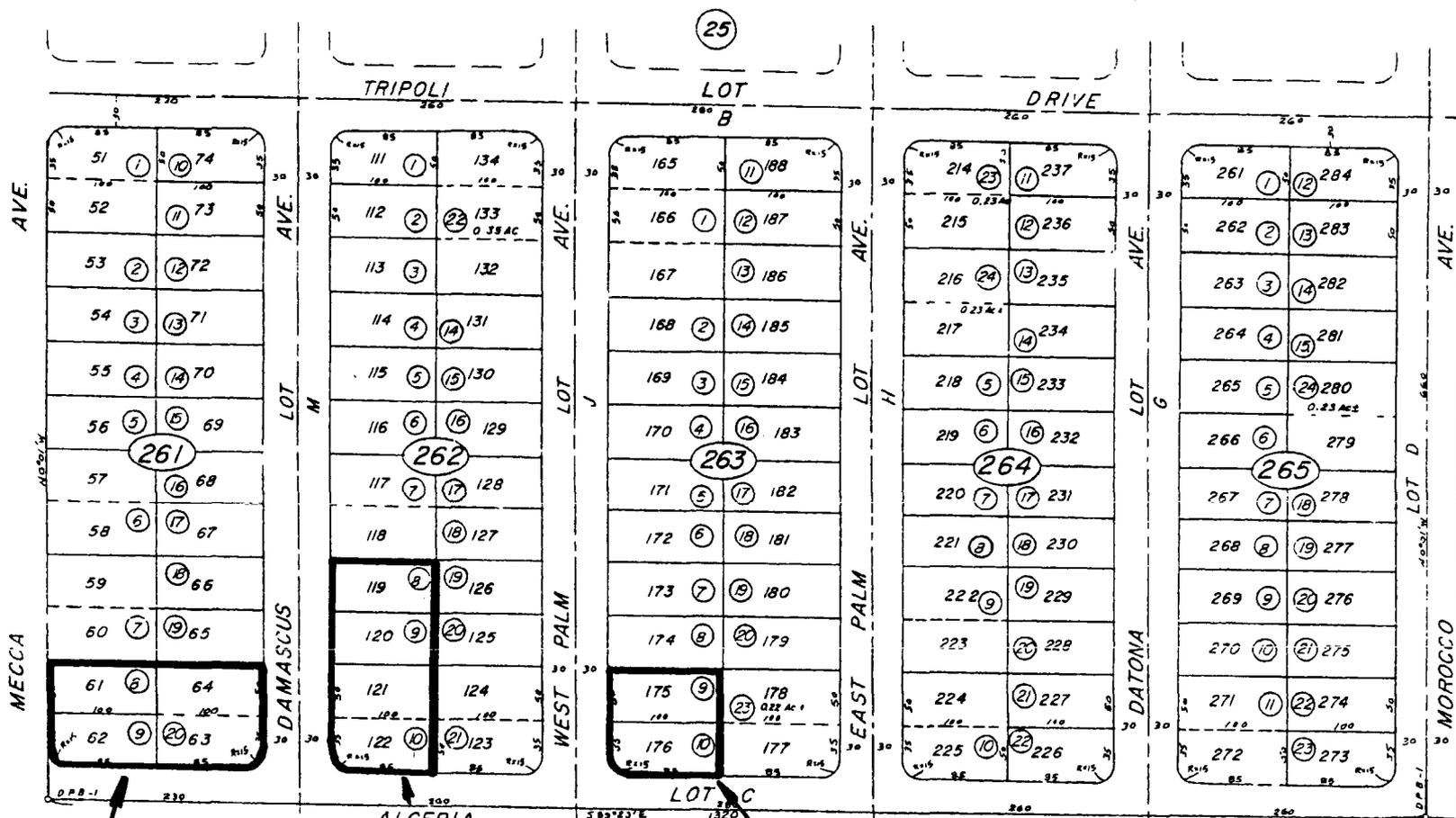
APR 05 2001

Map 7001

NO	DATE	BY	REVISION
1	11-10-99	BBB	INITIAL
2	12-11-99	BBB	REVISION
3	12-11-99	BBB	REVISION
4	12-11-99	BBB	REVISION
5	12-11-99	BBB	REVISION
6	12-11-99	BBB	REVISION
7	12-11-99	BBB	REVISION
8	12-11-99	BBB	REVISION
9	12-11-99	BBB	REVISION
10	12-11-99	BBB	REVISION

PARCEL 14

1" = 100'



DATE	OLD No	NEW No
10/23	1, 2	24-25
10/23	3, 4	26-27
11/74	245-25	245-24
07/76	261	CANCEL
"	262	"
"	263	"
4-78	263-24	22
11/82	21, 22	263-23

MB 18/9 DATE PALM BEACH UNIT NO. 1

NOTE: STREETS NOT ACCEPTED AS PUBLIC STREETS

DEC 1965

PARCEL 24

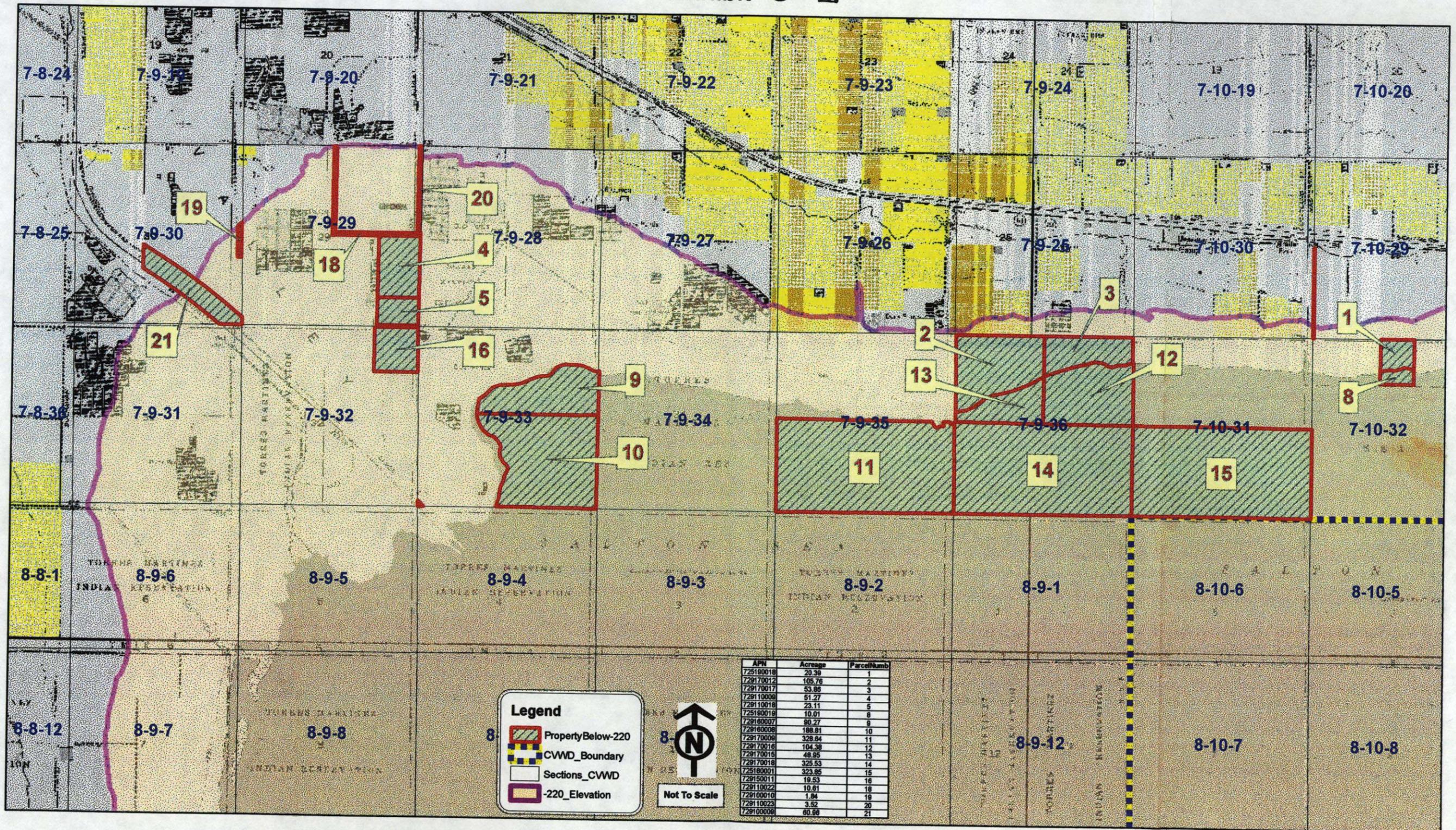
PARCEL 25

PARCEL 26

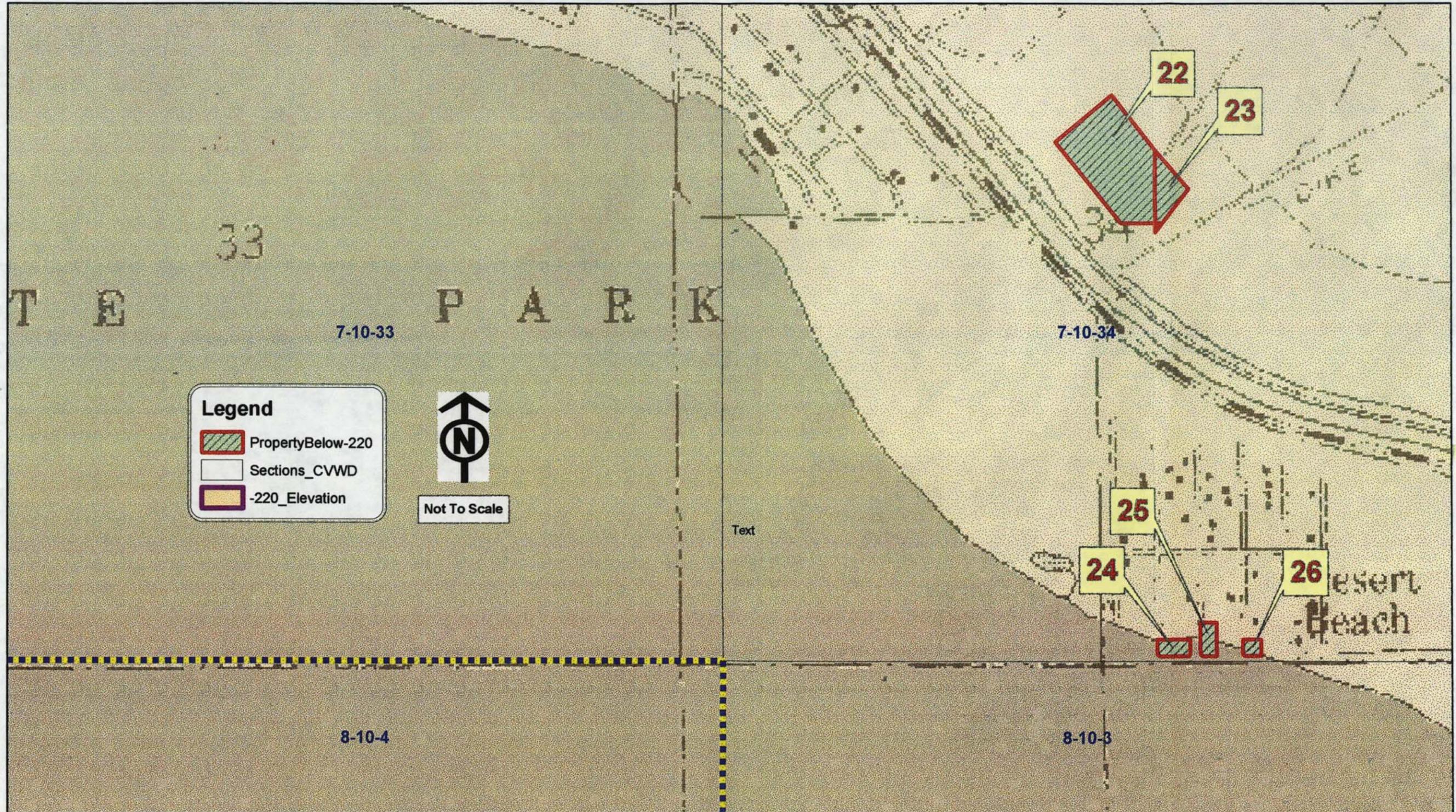
ASSESSOR'S MAP BK. 723 PS 26
RIVERSIDE COUNTY, CALIF.

Exhibit G

Salton Sea IID Lawsuit Map Property Below the -220' Elevation Exhibit "G"-1



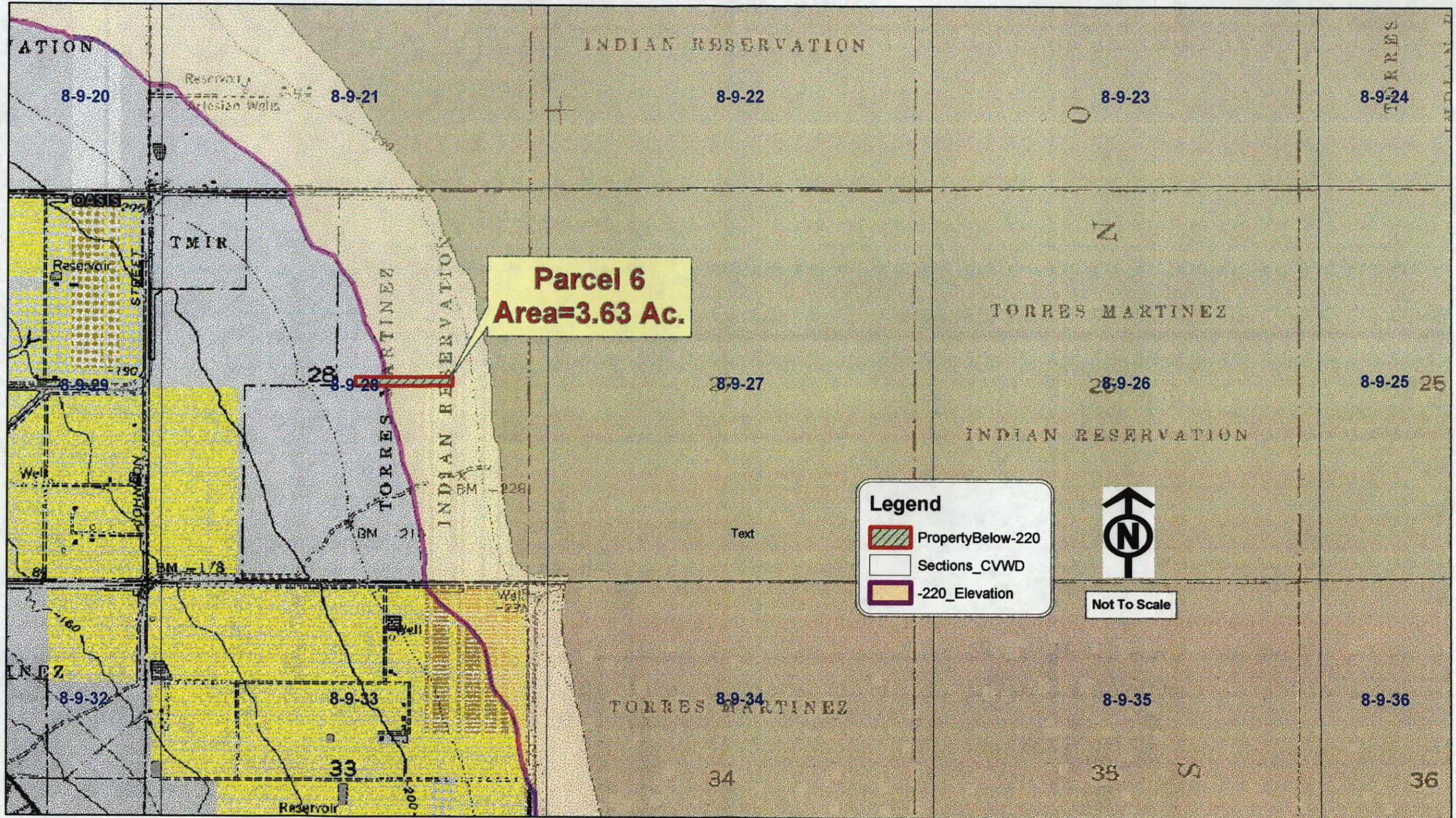
Salton Sea IID Lawsuit Map
Property Below the -220' Elevation
Exhibit "G"-2



Salton Sea IID Lawsuit Map

Property Below the -220' Elevation

Exhibit "G"-3



Legend

- PropertyBelow-220
- Sections_CVWD
- 220_Elevation

Not To Scale

Salton Sea IID Lawsuit

Parcels 7 and 17 T9S, R12E, Sec. 33

EXHIBIT "G" - 4

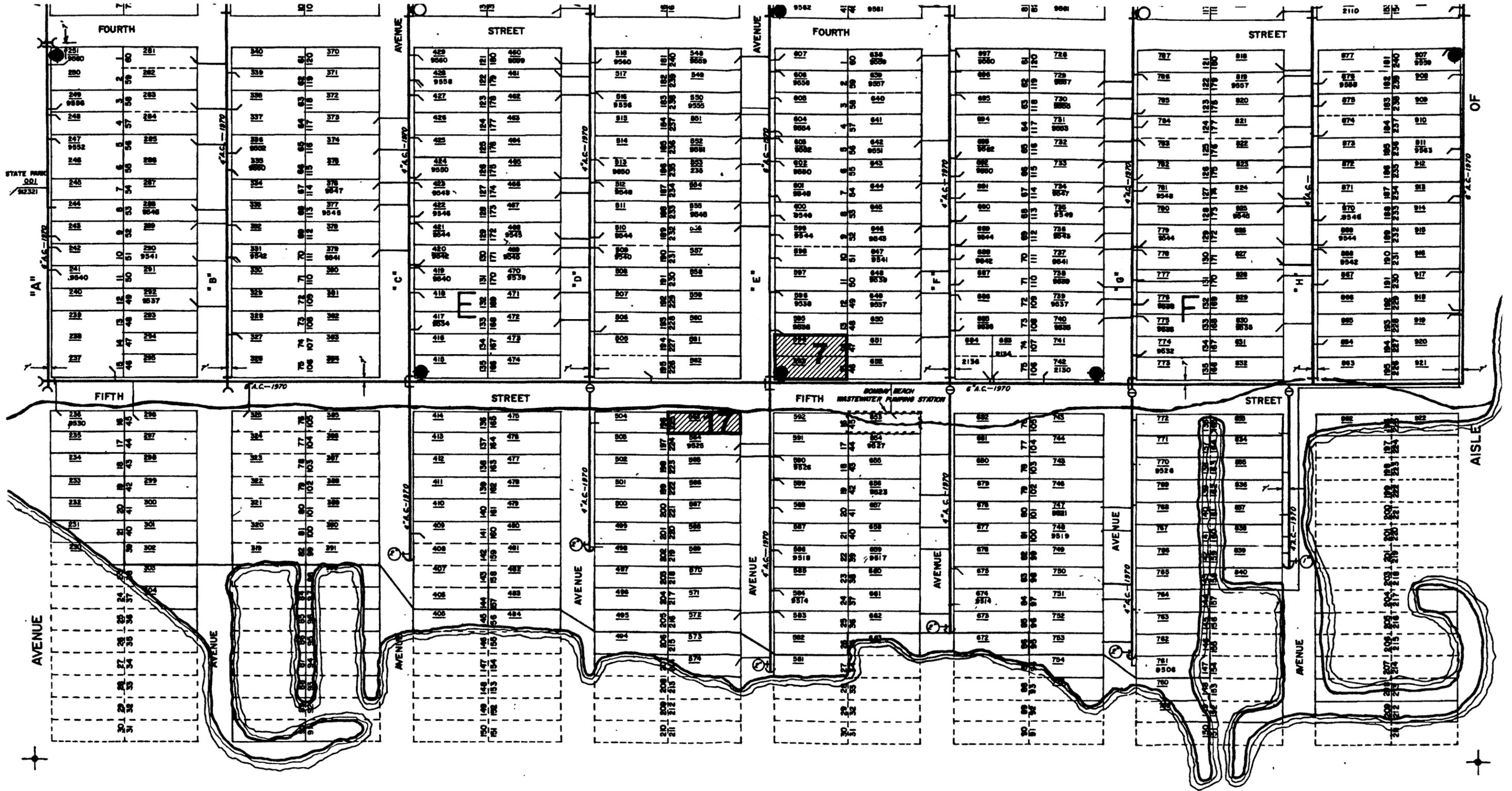


Exhibit H

EXHIBIT H

Description of the Lands to
which IID has an Interest for
Flooding and Drainage Purposes
that lie below -220' ("IID
Easements") (Paragraph 3-c)

[TO BE PROVIDED BY IID AND
INSERTED AT A LATER TIME]

Exhibit I

EXHIBIT I

DRAINAGE AND FLOOD EASEMENTS

PARCEL NO. 1

The West 30.00 feet of the East 60.00 feet of the East half of the Northeast quarter of Section 29, Township 7 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 2

The West 90.00 feet of the Northeast quarter of Section 35, Township 7 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 3

The Northwest quarter of Section 31, Township 7 South, Range 10 East, San Bernardino Meridian, described as follows:

The West 90.00 feet of said Northwest quarter.

PARCEL NO. 4

The Northwest quarter of Section 33, Township 7 South, Range 10 East, San Bernardino Meridian, described as follows:

The East 150.00 feet of the Northwest quarter of Section 33, Township 7 South, Range 10 East, San Bernardino Meridian.

PARCEL NO. 5

The Northwest quarter of the Northwest quarter of Section 33, Township 7 South, Range 10 East, San Bernardino Meridian, described as follows:

The West 90.00 feet of said Northwest quarter of the Northwest quarter.

PARCEL NO. 6

The North 75.00 feet of the Northeast quarter of the Southwest quarter of Section 21, Township 8 South, Range 9 East, San Bernardino Meridian.

EXHIBIT I - Continued

PARCEL NO. 7

That portion of the South half of the South half of the Southwest quarter of Section 21, Township 8 South, Range 9 East, San Bernardino Meridian, described as follows:

BEGINNING at the Southwest corner of said parcel;

THENCE along the South line of said parcel, North 89°58' East 2,641.32 feet to the Southeast corner of said parcel;

THENCE North 0°02' West 25.00 feet;

THENCE South 89°58' West 2,441.32 feet;

THENCE North 82°52' West 201.56 feet to the West line of said parcel;

THENCE South 0°02' East 50.00 feet along said West line to the POINT OF BEGINNING.

PARCEL NO. 8

The West 90.00 feet of the Northeast quarter of Section 28, Township 7 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 9

The West 45.00 feet of the Southwest quarter of the Southeast quarter of Section 27, Township 7 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 10

The East 45.00 feet of the Southeast quarter of the Southwest quarter of Section 27, Township 7 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 11

That portion of the South half of the Southeast quarter of Section 30, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The West 120.00 feet of the East 150.00 feet of said portion of the Southeast quarter.

EXHIBIT I - Continued

PARCEL NO. 12

The North 62.50 feet of the Northwest quarter of the Northwest quarter of Section 34, Township 8 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 13

The South 62.5 feet of the Northwest quarter of the Southwest quarter of Section 34, Township 8 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 14

The North 75.00 feet of the Northwest quarter of the Southwest quarter of Section 21, Township 8 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 15

All of Section 33, Township 7 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 16

That portion of the Southwest quarter of the Southwest quarter of Section 33, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

BEGINNING at the Southwest corner of said Section 33;

THENCE East along the South line of Section 33, a distance of 400.00 feet;

THENCE northwesterly to a point on the West line of Section 33, said point lying 400.00 feet North of the Southwest corner of Section 33;

THENCE South along the West line of Section 33 to the POINT OF BEGINNING.

PARCEL NO. 17

That portion of land lying in the Southeast quarter of the Northeast quarter of Section 28, Township 8 South, Range 9 East, San Bernardino Meridian, described as follows:

The South 120.00 feet thereof.

PARCEL NO. 18

The North 100.00 feet of the Northeast quarter of the Northeast quarter of Section 28, Township 8 South, Range 9 East, San Bernardino Meridian.

EXHIBIT I - Continued

PARCEL NO. 19

The North 100.00 feet of the Northeast quarter of the Northwest quarter of Section 28, Township 8 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 20

The North 38.00 feet of the North half of the North half of the Northeast quarter, Section 33, Township 8 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 21

The Southeast quarter of Section 7, Township 8 South, Range 9 East, San Bernardino Meridian, described as follows:

The South 100.00 feet of said Southeast quarter.

PARCEL NO. 22

That portion of land lying in the Government Lot 1 and the South 29.91 acres of Government Lot 2 of the Southwest quarter of Section 7, Township 8 South, Range 9 East, San Bernardino Meridian, described as follows:

The South 120.00 feet thereof.

PARCEL NO. 23

The North 55.00 feet of the West half of the Northwest quarter of the Northeast quarter of said Section 7, Township 8 South, Range 9 East, San Bernardino Meridian.

PARCEL NO. 24

That portion of Township 8 South, Range 9 East, San Bernardino Meridian, described as follows:

Parcel 1: The South 62.50 feet of Section 27.

Parcel 2: The North 100.00 feet of Section 27.

Parcel 3: The South 25.00 feet of the Southeast quarter of Section 21.

Parcel 4: The North 75.00 feet of the Southeast quarter of Section 21.

Parcel 5: The South 75.00 feet of the North half of Section 21.

Parcel 6: The North 62.50 feet of the South half of the North half of Section 17.

Parcel 7: The South 62.50 feet of the North half of the North half of Section 17.

EXHIBIT I - Continued

PARCEL NO. 25

That portion of the Southwest quarter of the Southeast quarter of Section 25, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The East 50.00 feet of the West 80.00 feet of said portion of the Southwest quarter of the Southeast quarter.

PARCEL NO. 26

That portion of the South half of the Southeast quarter of the Southeast quarter of Section 25, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The West 50.00 feet of the East 80.00 feet and the South 200.00 feet of the East 30.00 feet.

PARCEL NO. 27

That portion of Section 25, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The East 45.00 feet of the East half of the Southwest quarter of said Section 25.

PARCEL NO. 28

That portion of the East half of the Northwest quarter lying northeasterly of the Southern Pacific Railroad Company right-of-way of Section 25, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

The East 25.00 feet.

PARCEL NO. 29

That portion of the Northwest quarter lying North of the Southern Pacific Railroad Company right-of-way of Section 25, Township 7 South, Range 9 East, San Bernardino Meridian, described as follows:

A strip of land 50.00 feet in width adjacent to and parallel to the northerly right-of-way line of the Southern Pacific Railroad Company and extending from the West line to the East line of said Northwest quarter.

EXHIBIT I - Continued

PARCEL NO. 30

A portion of the Northeast quarter of Section 31, Township 7 south, Range 9 East, San Bernardino Meridian, described as follows:

BEGINNING in the Northeast corner of Section 31, Township 7 South, Range 9 East, San Bernardino Meridian;

THENCE South $0^{\circ}01'47''$ East along the East line of said Section 31, a distance of 589.11 feet;

THENCE North $47^{\circ}48'10''$ West, a distance of 1.96 feet to a point of curve;

THENCE continuing northwesterly along the arc of a curve to the left having a radius of 19,400.00 feet through a central angle of $2^{\circ}37'12''$, a distance of 887.12 feet to the North line of said Section 31;

THENCE North $89^{\circ}23'18''$ East along the said North line of Section 31, a distance of 671.67 feet to the POINT OF BEGINNING.

PARCEL NO. 31

All that certain real property situated in said County and State and being all that part of the Southwest quarter of Section 29, Township 7 South, Range 9 East, San Bernardino Meridian, that is bounded as follows, to-wit:

BEGINNING at the Southwest corner of said Section 29, running thence North $2^{\circ}30'$ East along the West line of said section, 262.05 feet;

THENCE South $46^{\circ}39'30''$ East, 390.88 feet to the South line of said section;

THENCE North $88^{\circ}44'38''$ West along said South line of said section to the POINT OF BEGINNING.

PARCEL NO. 32

A parcel of land in the East half of Section 34, Township 7 South, Range 10 East, San Bernardino Meridian, described as follows:

BEGINNING at a point on the West line of the Southeast quarter of Section 34, Township 7 South, Range 10 East, San Bernardino Meridian, 49.75 feet South of the Northwest corner;

THENCE South $00^{\circ}45'24''$ East along said West line, a distance of 189.67 feet to the Northeasterly right-of-way line of the Southern Pacific Railroad Company;

EXHIBIT I - Continued

THENCE Southeasterly along said right-of-way line following the arc of a curve concave to the left, whose tangent bears South 45°56'36" East, having a radius of 2,765.00 feet, through a central angle of 00°49'44", a distance of 40.00 feet;

THENCE North 63°19'29" East, a distance of 1,171.95 feet;

THENCE North 36°47'07" East, a distance of 2,575.00 feet to the East line of the Northeast quarter of said Section 34;

THENCE North 00°37'24" West along said East line, a distance of 329.22 feet to the Northeast corner of said Northeast quarter;

THENCE South 89°59'36" West along the North line of said Northeast quarter, a distance of 249.74 feet;

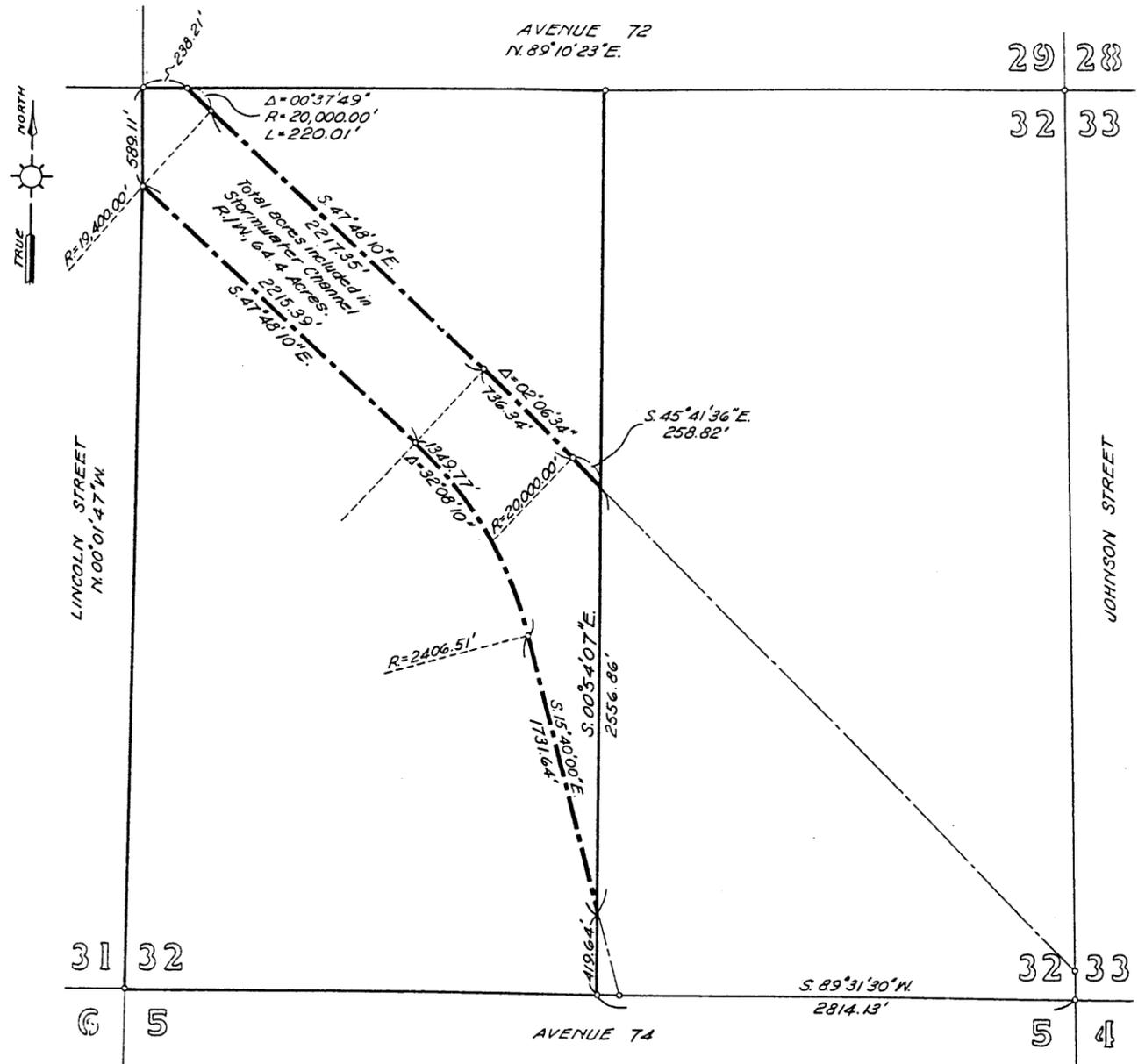
THENCE South 36°47'07" West, a distance of 1,940.00 feet;

THENCE South 49°30'00" West, a distance of 1,185.00 feet;

THENCE South 38°54'06" West, a distance of 482.55 feet to the POINT OF BEGINNING.

PARCEL NO. 33

All those rights-of way for drainage and flood easements issued by the Bureau of Indian Affairs on District Drawing Nos. 10,526 filed July 6, 1961; 10,527 filed July 6, 1961; 1050-1 dated September 21, 1940; 10,540 filed July 6, 1961; 10,542 filed July 6, 1961; and 10,541 filed January 11, 1962. All of the foregoing maps were filed in the Riverside County Records Office.



State of California) SS
County of Riverside)

AFFIDAVIT OF ENGINEER

Lowell O. Weeks, being duly sworn, says that he is the Chief Engineer and General Manager of the Coachella Valley County Water District, that pursuant to the provisions of the Act of August 28, 1958, (Public Law 85-801, 72 Stat. 968), and the authorized Contract No. 14-20-630-631, dated October 14, 1958, this map correctly represents the location of certain parts of the constructed drainage works and that the surveys were made under his direction as Chief Engineer.

Date: November 8, 1960 By: Lowell O. Weeks
Lowell O. Weeks, Chief Engineer
COACHELLA VALLEY COUNTY WATER DISTRICT

Sworn and subscribed to this 8th day of November, 1960.
(SEAL)

My commission expires March 14, 1964.

Carl L. Nelson, Jr.
Carl L. Nelson, Jr., Notary Public

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
SACRAMENTO, CALIFORNIA

I, Leonard M. Hill, the Area Director of the Sacramento Area, do hereby certify that this map delineates to the best of my belief, the survey of rights of way for certain parts of the constructed drainage works.

Pursuant to the provisions of the Act of August 28, 1958, (Public Law 85-801, 72 Stat. 968), the delegation of authority by the Secretary of the Interior, Order No. 2508, Amendment No. 33, dated Jan. 13, 1960 and the delegation of authority by the Commissioner of Indian Affairs, Order No. 531, Amendment No. 58, dated Feb. 1, 1960 (P.R. Doc. 60-1125 Filed Feb. 2, 1960), I hereby take the rights of way designated hereon subject to any prior, valid, existing rights or adverse claims and cause payment of just compensation therefor.

Date: June 26, 1961 Leonard M. Hill
Area Director

CONVEYANCE OF RIGHT OF WAY FOR STORMWATER CHANNEL

Pursuant to the provisions of the Act of August 28, 1958, (Public Law 85-801, 72 Stat. 968), the delegation of authority by the Secretary of the Interior, Order No. 2508, Amendment No. 33, dated Jan. 13, 1960 and the delegation of authority by the Commissioner of Indian Affairs, Order No. 531, Amendment No. 58, dated Feb. 1, 1960 (P.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby convey to the Coachella Valley County Water District an easement in perpetuity for the right of way of the Coachella Valley Stormwater Channel as a part of the drainage works now administered by the District and as delineated on this map as a Stormwater Channel comprising 24.4 acres, subject to any prior, valid, existing rights or adverse claims. The District has paid just compensation for this right of way.

Date: June 26, 1961 Leonard M. Hill
Area Director

NOTE: Bearings on this survey are referred to local true north, and are based upon T. S. Bureau of Reclamation, Coachella Valley Triangulation.

Right of way for stormwater channel which is a part of the drainage works now administered by the Coachella Valley County Water District.

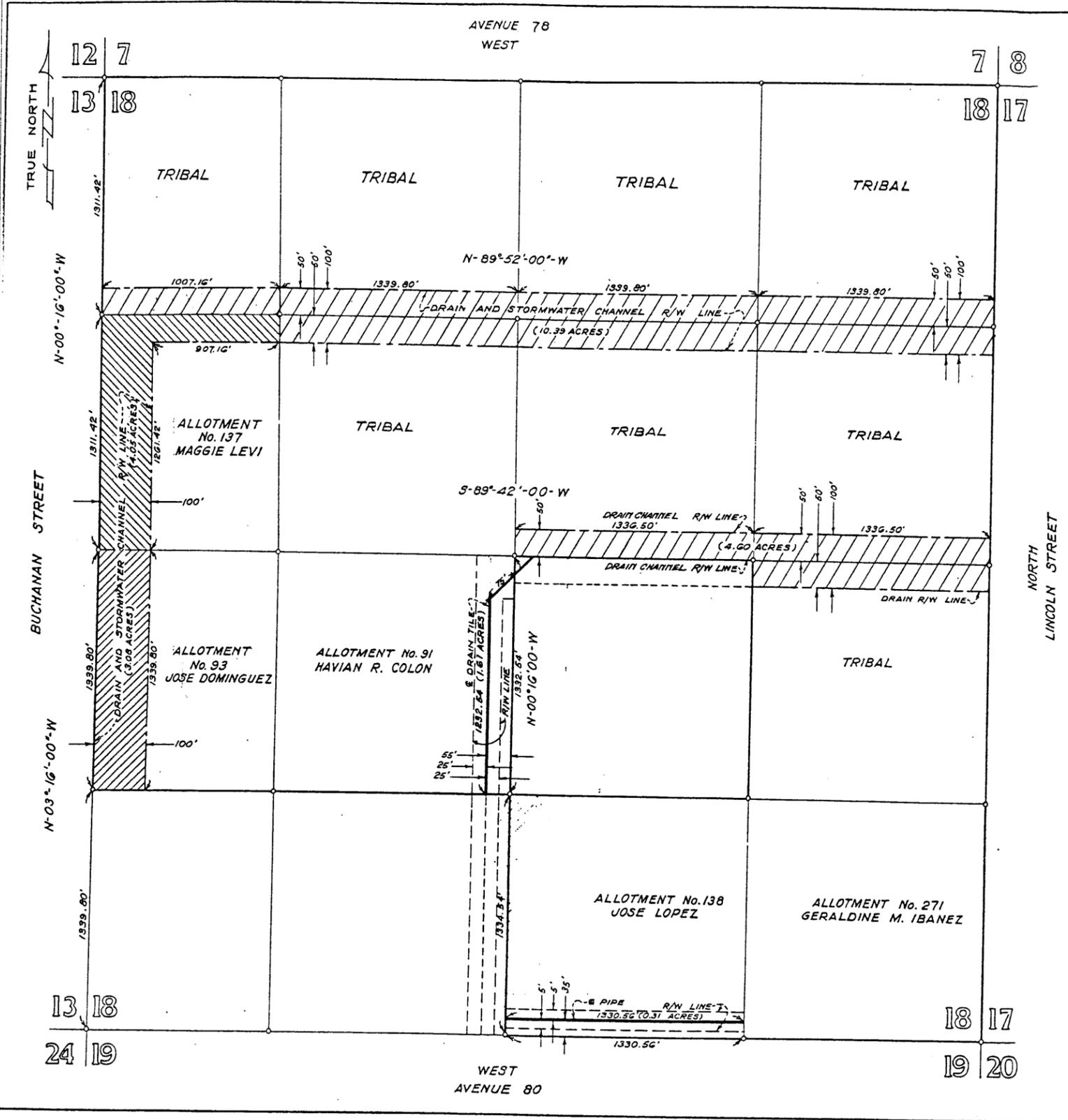


FILED WITH RIVERSIDE COUNTY
RECORDERS OFFICE JULY 6, 1961
INSTRUMENT NO. 57655

U.S. DEPT. OF INTERIOR
BUREAU OF INDIAN AFFAIRS

MAP OF
RIGHTS OF WAY FOR
COACHELLA VALLEY STORMWATER CHANNEL
TORRES-MARTINEZ INDIAN RESERVATION
IN Section 32, T7S-R9E.

Surveyed By D.S.B.
Drawn By R.T.C.
Checked By W.H.P.
OCT. 21, 1960. G.V.C.W.D. Draw No. 10,526



AFFIDAVIT OF ENGINEERS

State of California) ss
County of Riverside)

Lowell O. Weeks, being duly sworn, says that he is the Chief Engineer and General Manager of the Coachella Valley County Water District, that pursuant to the provisions of the Act of August 20, 1936 (Public Law 65-801, 72 Stat. 968) and the authorized Contract No. 14-20-630-631, dated October 14, 1958, this map correctly represents the location of proposed irrigation distribution system and drainage works, and certain drainage works now administered by the District.

Date: March 15, 1961 By Lowell O. Weeks
Lowell O. Weeks, Chief Engineer
COACHELLA VALLEY COUNTY WATER DISTRICT

Sworn and subscribed to this 15th day of March, 1961.

Carl L. Nelson, Jr.
Carl L. Nelson, Jr., Notary Public

My commission expires March 14, 1964.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
SACRAMENTO, CALIFORNIA

I, Leonard H. Hill, the Area Director of the Sacramento Area, do hereby certify that this map delineates to the best of my belief, the survey of rights of way for the certain proposed irrigation distribution system and drainage works.

Pursuant to the provisions of the Act of August 20, 1936 (Public Law 65-801, 72 Stat. 968), the delegation of authority by the Secretary of the Interior, Order No. 2506, Amendment No. 33, dated Jan. 13, 1950, and the delegation of authority by the Commissioner of Indian Affairs, Order No. 551, Amendment No. 58, dated Feb. 1, 1960, (F.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby convey the rights of way designated hereon, subject to any prior, valid, existing rights or adverse claims and cause the payment of just compensation therefore.

Date: June 26, 1961 Leonard H. Hill
Area Director

CONVEYANCE OF RIGHT OF WAY FOR DRAINS AND/OR STORMWATER CHANNELS

Pursuant to the provisions of the Act of August 20, 1936, (Public Law 65-801, 72 Stat. 968), the delegation of authority by the Secretary of the Interior, Order No. 2506, Amendment No. 33, dated Jan. 13, 1950, and the delegation of authority by the Commissioner of Indian Affairs, Order No. 551, Amendment No. 58, dated Feb. 1, 1960, (F.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby convey to the Coachella Valley County Water District an easement in perpetuity for the right of way for drains and/or stormwater channels as delineated on this map as drain and/or stormwater channel comprising 23.99 acres, subject to any prior, valid, existing rights or adverse claims. The District has paid just compensation therefore.

Date: June 26, 1961 Leonard H. Hill
Area Director

- LEGEND
- Tribal lands within Drain and/or Stormwater Channel Rights of Way now administered by the Coachella Valley County Water District.
 - Allotted lands within Drain and/or Stormwater Channel Rights of Way now administered by the Coachella Valley County Water District.
 - Property Corners.
 - Right of Way for works to be constructed by the United States in accordance with Public Law No. 65-801.
 - Right of Way for Drains and/or Stormwater Channels.
 - Right of way for irrigation pipelines, 5 feet on each side of center line.
 - Right of way for drain tile, 25 feet on each side of center line.

NOTES

The irrigation system and the drainage works except for control structures will be underground.

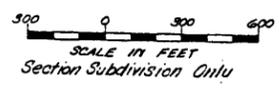
The bearings and distances shown were taken from U.S. General Land Office Resurvey Plat of TBS R9E S.B.S.W. Prepared for allotment of lands within the Martinez-Torres Mission Indian Reservation. Plat was approved by the U.S. Surveyor General for California on May 27, 1924. No field survey was made by the Coachella Valley County Water District.

FILED WITH RIVERSIDE COUNTY
RECORDERS OFFICE JULY 6, 1961
INSTRUMENT NO. 57662

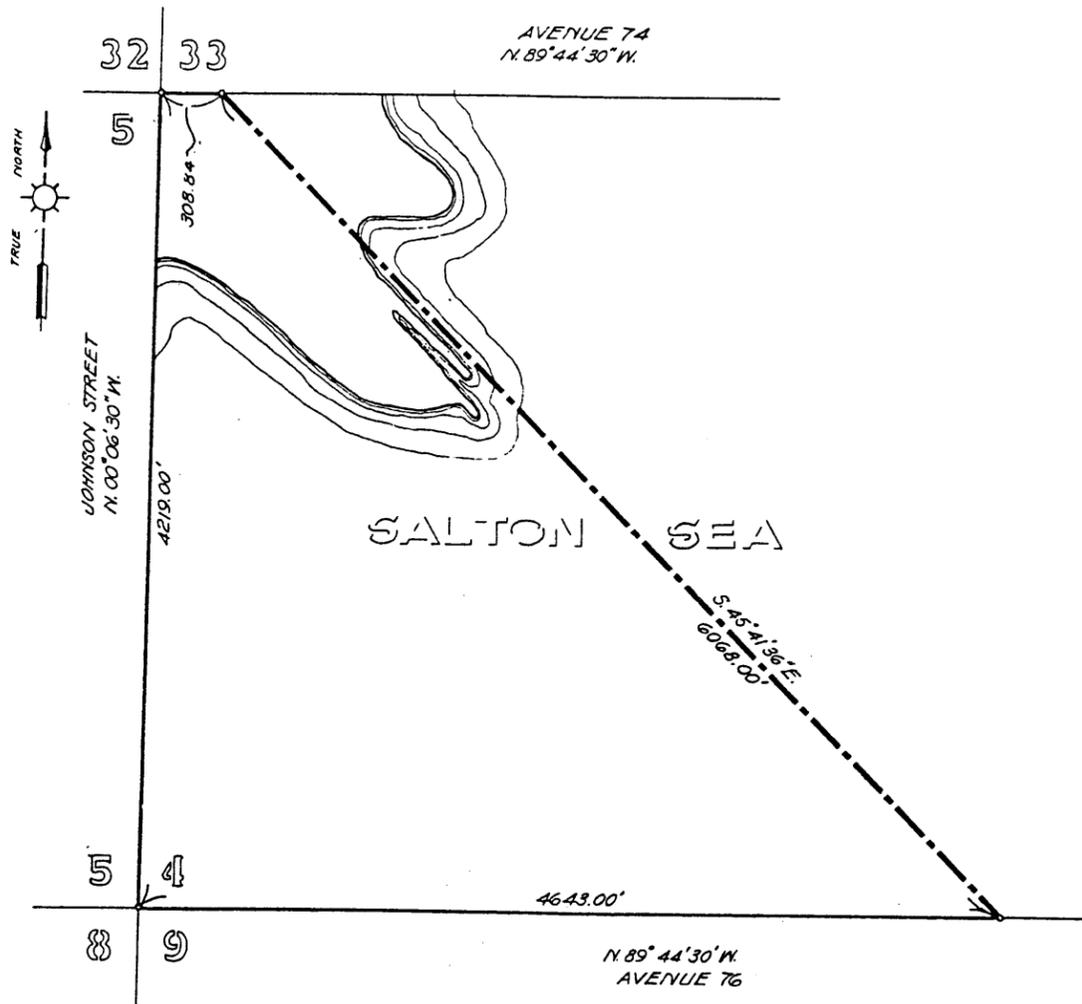
U.S. DEPT. OF INTERIOR
BUREAU OF INDIAN AFFAIRS

MAP OF
RIGHTS OF WAY FOR
IRRIGATION SYSTEM & DRAINAGE WORKS
TORRES-MARTINEZ INDIAN RESERVATION
Section 18, T8S-R9E

Surveyed By: _____
Drawn By: J.L.M.
Checked By: J.M.P.
December 30, 1961 C.V.C.W.D. Dwg. No. 10,540



0882



AFFIDAVIT OF ENGINEER

State of California,
County of Riverside) ss

Lowell O. Weeks, being duly sworn, says that he is the Chief Engineer and General Manager of the Coachella Valley County Water District, that pursuant to the provisions of the Act of August 28, 1958, (Public Law 85-801, 72 Stat. 908), and the authorized Contract No. 14-20-630-631, dated October 14, 1958, this map correctly represents the location of certain parts of the constructed drainage works and that the surveys were made under his direction as Chief Engineer.

Date: November 8, 1960 By: Lowell O. Weeks
Lowell O. Weeks, Chief Engineer
COACHELLA VALLEY COUNTY WATER DISTRICT

Sworn and subscribed to this 8th day of November, 1960.

(SEAL) Earl L. Nelson, Jr.
Earl L. Nelson, Jr., Notary Public

My commission expires March 14, 1964.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
SACRAMENTO, CALIFORNIA

I, Leonard V. Hill, the Area Director of the Sacramento Area, do hereby certify that this map delineates to the best of my belief, the survey of rights of way for certain parts of the constructed drainage works.

Pursuant to the provisions of the Act of August 28, 1958, (Public Law 85-801, 72 Stat. 908), the delegation of authority by the Secretary of the Interior, Order No. 2506, Amendment No. 33, dated Jan. 13, 1960 and the delegation of authority by the Commissioner of Indian Affairs, Order No. 531, Amendment No. 58, dated February 1, 1960 (P.R. Dec. 60-1125, Filed Feb. 2, 1960), I hereby take the rights of way designated hereon subject to any prior, valid, existing rights or adverse claims and cause payment of just compensation therefore.

Date: June 26, 1961 Leonard V. Hill
Area Director

CONVEYANCE OF RIGHT OF WAY FOR STORMWATER CHANNEL

Pursuant to the provisions of the Act of August 28, 1958, (Public Law 85-801, 72 Stat. 908), the delegation of authority by the Secretary of the Interior, Order No. 2506, Amendment No. 33, dated Jan. 13, 1960 and the delegation of authority by the Commissioner of Indian Affairs, Order No. 531, Amendment No. 58, dated February 1, 1960 (P.R. Dec. 60-1125, Filed Feb. 2, 1960), I hereby convey to the Coachella Valley County Water District an easement in perpetuity for the right of way of the Coachella Valley Stormwater Channel as a part of the drainage works now administered by the District and as delineated on this map as a Stormwater Channel comprising 239.8 acres, subject to any prior, valid, existing rights or adverse claims. The District has paid just compensation for this right of way.

Date: June 26, 1961 Leonard V. Hill
Area Director

NOTE: Bearings on this survey are referred to local true north, and are based upon U. S. Bureau of Reclamation, Coachella Valley Triangulation.

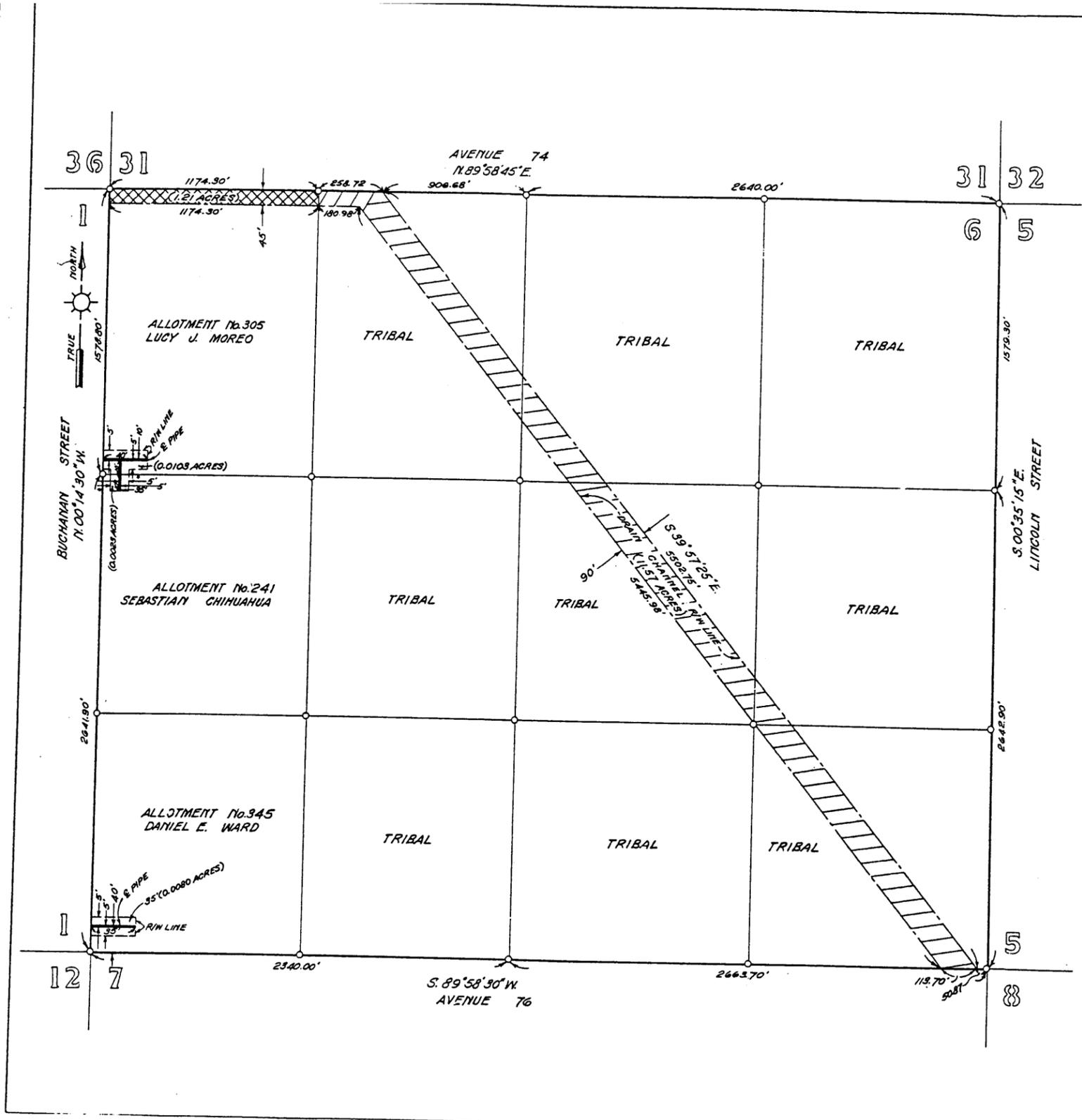
Right of way for stormwater channel which is a part of the drainage works now administered by the Coachella Valley County Water District.

Water area in Salton Sea within R/W	212.3 Acres
Land area within R/W	27.5 Acres
Total Area	239.8 Acres

FILED WITH RIVERSIDE COUNTY
RECORDERS OFFICE JULY 6, 1961
INSTRUMENT NO. 57664



U.S. DEPT OF INTERIOR
BUREAU OF INDIAN AFFAIRS
MAP OF
RIGHTS OF WAY FOR
COACHELLA VALLEY STORMWATER CHANNEL
TORRES-MARTINEZ INDIAN RESERVATION
Section 4, T8S-R9E
Surveyed By D.S.B.
Drawn By R.T.C.
Checked By RLP
Oct. 25, 1960 G.W.C.W.D. Div. No. 10,527



AFFIDAVIT OF ENGINEER

State of California)
County of Riverside) **

Lowell O. Weeks, being duly sworn, says that he is the Chief Engineer and General Manager of the Coachella Valley County Water District, that pursuant to the provisions of the Act of August 20, 1958 (Public Law 85-801, 72 Stat. 908) and the authorized Contract No. 14-20-530-531, dated October 14, 1958, this map correctly represents the location of proposed irrigation distribution system and drainage works which is now administered by the District, and that the surveys for the drain were made under his direction as Chief Engineer.

Date: March 14, 1961 By Lowell O. Weeks
Lowell O. Weeks, Chief Engineer
COACHELLA VALLEY COUNTY WATER DISTRICT

Sworn and subscribed to this 14th day of March, 1961.
(SEAL) Carl L. Nelson, Jr.
Carl L. Nelson, Jr., Notary Public

My commission expires March 14, 1964.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
SACRAMENTO, CALIFORNIA

I, Leonard M. Hill, the Area Director of the Sacramento Area, do hereby certify that this map delineates to the best of my belief, the survey of rights of way for the certain proposed irrigation distribution system.

Pursuant to the provisions of the Act of August 20, 1958 (Public Law 85-801, 72 Stat. 908), the delegation of authority by the Secretary of the Interior, Order No. 2506, Amendment No. 33, dated Jan. 13, 1960 and the delegation of authority by the Commissioner of Indian Affairs, Order No. 551, Amendment No. 58, dated Feb. 1, 1960 (F.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby convey to the Coachella Valley County Water District an easement in perpetuity for the right of way for the drain channel as delineated on this map as a drain channel comprising 12.78 acres, subject to any prior, valid, existing rights or adverse claims and cause the payment of just compensation therefor.

Date: June 26, 1961 Leonard M. Hill
Area Director

CONVEYANCE OF RIGHT OF WAY FOR DRAIN CHANNEL

Pursuant to the provisions of the Act of August 20, 1958, (Public Law 85-801, 72 Stat. 908), the delegation of authority by the Secretary of Interior, Order No. 2506, Amendment No. 33, dated Jan. 13, 1960, and the delegation of authority by the Commissioner of Indian Affairs, Order No. 551, Amendment No. 58, dated Feb. 1, 1960 (F.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby convey to the Coachella Valley County Water District an easement in perpetuity for the right of way for the drain channel as delineated on this map as a drain channel comprising 12.78 acres, subject to any prior, valid, existing rights or adverse claims. The District has paid just compensation therefor.

Date: June 26, 1961 Leonard M. Hill
Area Director

- LEGEND
- Tribal lands within Drain Channel Right of Way now administered by the Coachella Valley County Water District.
 - Allotted lands within Drain Channel Right of Way now administered by the Coachella Valley County Water District.
 - Property corners.
 - Right of Way for works to be constructed by the United States in accordance with Public Law No. 85-801.
 - Right of Way for Drain Channel.
 - Right of way for irrigation pipeline, 5 feet on each side of center line.

NOTES

The irrigation system, except for control structures will be underground.

The subdivision distances shown were taken from U.S. Bureau of Reclamation Drawing C-24-303, dated Feb. 6, 1938, revised Apr. 19, 1949 and Mar. 9, 1950.

The bearings were computed from U.S. Bureau of Reclamation Drawing C-6A-1125, dated Oct. 19, 1946, revised July 18, 1950.

FILED WITH RIVERSIDE COUNTY
RECORDERS OFFICE JULY 6, 1961
INSTRUMENT NO. 57663

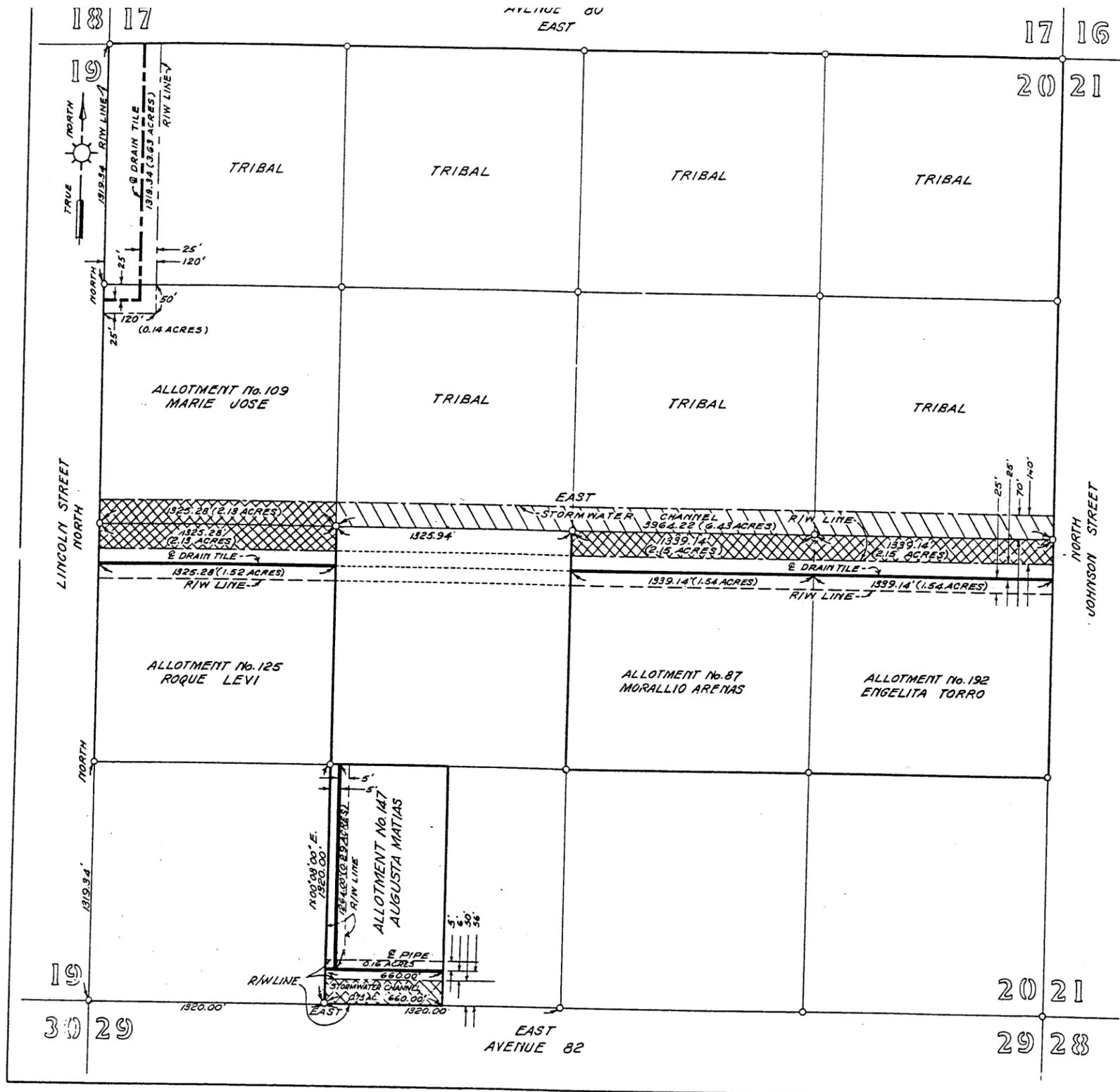
U.S. DEPT. OF INTERIOR
BUREAU OF INDIAN AFFAIRS

MAP OF
RIGHTS OF WAY FOR
IRRIGATION SYSTEM & DRAINAGE WORKS
TORRES-MARTINEZ INDIAN RESERVATION
Section 6, T8S-R9E.

Surveyed By _____
Drawn By R.T.G.
Checked By G.M.P.
Dec. 30, 1960 C.V.C.M.D. Draw. No. 10, 542

0 300 600
SCALE IN FEET
Section Subdivision Only

1440



AFFIDAVIT OF ENGINEER

State of California) ss
County of Riverside)

Lowell O. Weeks, being duly sworn, says that he is the Chief Engineer and General Manager of the Coachella Valley County Water District, that pursuant to the provisions of the Act of August 20, 1958 (Public Law 85-801, 72 Stat. 968) and the authorized Contract No. 14-20-650-631, dated October 14, 1958, this map correctly represents the location of proposed irrigation distribution system and drainage works, and certain drainage works now administered by the District.

Date: March 14, 1961 By Lowell O. Weeks
Lowell O. Weeks, Chief Engineer
COACHELLA VALLEY COUNTY WATER DISTRICT

Sworn and subscribed to this 14th day of March, 1961.
(SEAL) Carl L. Nelson, Jr.
Carl L. Nelson, Jr., Notary Public

My commission expires March 14, 1964.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
SACRAMENTO, CALIFORNIA

I, Leonard M. Hill, the Area Director of the Sacramento Area, do hereby certify that this map delineates to the best of my belief, the survey of rights of way for the certain proposed irrigation distribution system and drainage works.

Pursuant to the provisions of the Act of August 20, 1958 (Public Law 85-801, 72 Stat. 968), the delegation of authority by the Secretary of the Interior, Order No. 2508, Amendment No. 33, dated Jan. 13, 1960 and the (P.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby take the rights of way designated hereon, subject to any prior, valid, existing rights or adverse claims and cause the payment of just compensation therefore.

Date: Dec. 26, 1961 Leonard M. Hill
Area Director

CONVEYANCE OF RIGHT OF WAY FOR DRAINS AND/OR STORMWATER CHANNELS

Pursuant to the provisions of the Act of August 20, 1958, (Public Law 85-801, 72 Stat. 968), the delegation of authority by the Secretary of Interior, Order No. 2508, Amendment No. 33, dated Jan. 13, 1960, and the (P.R. Doc. 60-1125, Filed Feb. 2, 1960), I hereby convey to the Coachella Valley County Water District an easement in perpetuity for the right of way for drains and/or stormwater channels as delineated on this map as drain and/or stormwater channels comprising 12.51 Acres, subject to any prior, valid, existing rights or adverse claims. The District has paid just compensation therefore.

Date: Dec. 26, 1961 Leonard M. Hill
Area Director

- | | |
|---|--|
| <p>LEGEND</p> <ul style="list-style-type: none"> Tribal lands within Drain and/or Stormwater Channel Right of Way administered by the Coachella Valley County Water District. Allotted lands within Drain and/or Stormwater Channel Right of Way administered by the Coachella Valley County Water District. Property Corners. Right of Way for works to be constructed by the United States in accordance with Public Law No. 85-801. Right of Way for Drains and/or Stormwater Channels. Right of way for irrigation pipeline, 5 feet on each side of center line. Right of way for drain tile, 25 feet on each side of center line. Right of way for works to be constructed by the Coachella Valley County Water District. | <p>NOTES</p> <p>The irrigation system and the drainage works except for control structures will be underground.</p> <p>The bearings and distances shown were taken from U.S. General Land Office Resurvey Plat of T8S R9E S.3. S.3. S.6.W. Prepared for allotment of lands within the Martinez-Torres Mission Indian Reservation. Plat was approved by the U.S. Surveyor General for California on May 27, 1924.</p> <p>No field survey was made by the Coachella Valley County Water District.</p> |
|---|--|

FILED AS DOCUMENT NO. 3226, JANUARY 11, 1962

U.S. DEPT. OF INTERIOR
BUREAU OF INDIAN AFFAIRS

MAP OF
RIGHTS OF WAY FOR
IRRIGATION SYSTEM & DRAINAGE WORKS
TORRES-MARTINEZ INDIAN RESERVATION
Section 20, T8S-R9E.

Surveyed By _____
Drawn By R.T.C.
Checked By J.M.R.
Dec. 28, 1960 C.V.C.W.D. Dwg. No. 10,541

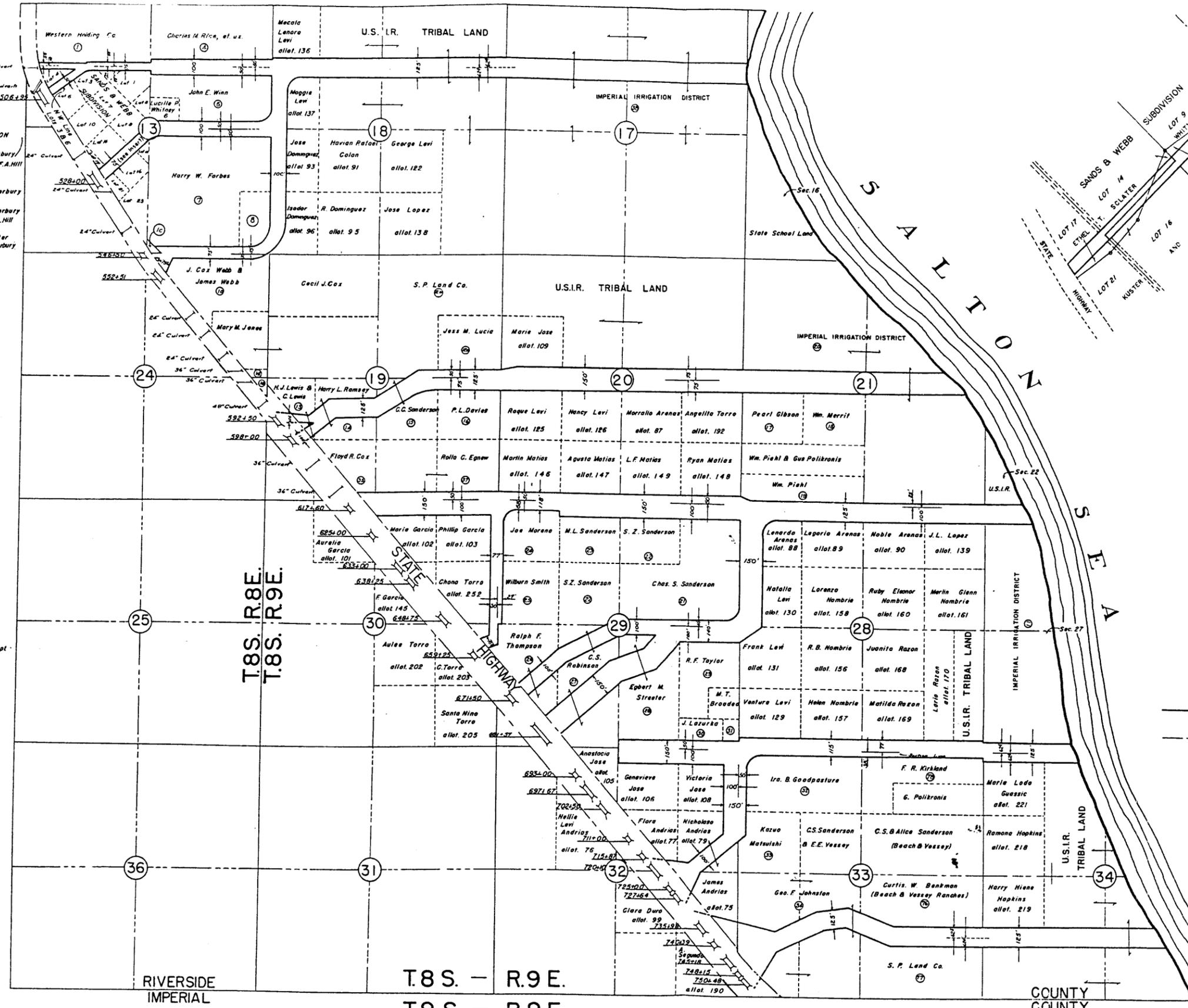
300 0 300 600
SCALE IN FEET
Section Subdivision Only

PROPERTY OWNERS OF SANDS & WEBB SUBDIVISION (E.T. Sclater)

- Lots 1, 2, Kuster & Waterbury
- Lots 3, 9, L.P. Whitney & F.A. Hill
- Lot 4, E.B. Spencer
- Lots 17, E.T. Sclater
- Lots 15, Kuster & Waterbury
- Lot 6, L.P. Whitney
- Lots 21, 23, Kuster & Waterbury
- Lot 8, L.P. Whitney & F.A. Hill
- Lot 10, F.A. Hill
- Lots 14, 16, Portions E.T. Sclater, Kuster & Waterbury

PARCEL OWNERS

- b, Elsie F. Randall
- 1c, California Highway Dept.
- 1d, Mabel S. Rolleston
- 1e, Ruth A. Roller



DEPARTMENT OF THE INTERIOR
 WASHINGTON, D.C. SEPT. 21, 1940
 APPROVED AS A REVOCABLE PERMIT UNDER THE GENERAL SUPERVISORY AUTHORITY OVER INDIAN AFFAIRS CONFERRED UPON THE SECRETARY OF THE INTERIOR BY SECTION 463, REVISED STATUTES (25 U.S.C. 2)
 W. C. Mendenhall
 (ACTING) ASSISTANT SECRETARY OF THE INTERIOR

LEGEND

- STORMWATER CHANNEL R/W BOUNDARY
- - - STATE HIGHWAY R/W BOUNDARY
- HIGHWAY BRIDGE
- 1" = 300' SCALE OF STORMWATER CHANNEL WIDTHS & ROADS
- 1" = 1000' SCALE OF GENERAL MAP

MAP OF STORMWATER CHANNELS

COACHELLA VALLEY COUNTY WATER DISTRICT

June 5, 1939 Sheet No. 1 Scale 1" = 1000'
 Drawn by E. L. ... APPROVED: ...
 Traced by C. Hall ...
 Checked by ...

SHEET 1 OF 2 2934 2934

Exhibit J

FALLBACK DIKE

SALTON SEA

TROPOLIM 23-B BORROW

TROPOLIM 21 BORROW

LEGEND

-  PRIMARY DIKE
-  FALL BACK DIKE
-  BREAK WATER
-  POTENTIAL FLOODED
HID PROPERTY
-  POTENTIAL FLOODED
PRIVATE PROPERTY
-  -225 CONTOUR
-  PRIMARY DIKE
REINFORCEMENT
-  BORROW AREAS
-  CAL ENERGY
FALL BACK DIKE

16 3:36 PM

**AGREEMENT BETWEEN
THE IMPERIAL IRRIGATION DISTRICT
AND THE DEPARTMENT OF WATER RESOURCES
FOR THE TRANSFER OF COLORADO RIVER WATER**

This Agreement is made and entered into between the Imperial Irrigation District (hereinafter “Imperial”) and the California Department of Water Resources (hereinafter the “Department”).

RECITALS

1. Legislation to implement the Colorado River Quantification Settlement Agreement (QSA) and State Salton Sea restoration actions (hereinafter “implementing legislation”) was enacted in 2003. The implementing legislation comprised SB 277 (Ch. 611, Stats. of 2003), SB 317 (Ch. 612, Stats. of 2003), and SB 654 (Ch. 613, Stats. of 2003). The implementing legislation found that restoration of the Salton Sea was in the State of California and national interest, and directed that specified actions be taken by the State of California to facilitate restoration. Among other things, the implementing legislation directed the Secretary for Resources to undertake a Salton Sea Restoration Study, established a Salton Sea Restoration Fund administered by the Department of Fish and Game (hereinafter “DFG”), and called for the Department of Water Resources (hereinafter “Department”) to acquire water from Imperial and to use the water or the proceeds from its sale to the Metropolitan Water District of Southern California (hereinafter “Metropolitan”) to benefit Salton Sea restoration.

2. SB 317 amended Section 2081.7 of the Fish and Game Code to require that Imperial make available to the Department 800,000 acre-feet (AF) of water obtained through conservation methods selected by Imperial, at a price of \$175/AF annually adjusted for inflation. Imperial is further required to make available, at no charge to the Department, a second increment of up to 800,000 AF of similarly conserved water through conservation methods selected by Imperial. The Department is to be responsible for mitigation of environmental impacts relating to use or transfer of the first 800,000 AF increment, and for mitigation of environmental impacts relating to Salton Sea salinity associated with use or transfer of the second 800,000 AF increment.

3. SB 317 further amended Section 2081.7 of the Fish and Game Code to require the Secretary for Resources, as part of undertaking the Salton Sea Restoration Study, to develop a plan for use of the second increment of up to 800,000 AF of conserved water. None of that water may be transferred unless the Secretary finds that transfer is consistent with the preferred alternative for Salton Sea restoration. Depending on the findings of the Restoration Study, it may be necessary for that water to remain available for maintenance of the Salton Sea's ecosystem, rather than be transferred outside of the Salton Basin.

4. SB 317 additionally amended Section 2081.7 of the Fish and Game Code to require that Metropolitan purchase the up to 1,600,000 AF of water made available by Imperial to the Department, at a price of not less than \$250/AF annually adjusted for inflation. The Department, after deducting its costs for administering the transaction and performing related environmental compliance actions and socioeconomic mitigation, is to deposit the proceeds of the transfer into the Salton Sea Restoration Account administered by DFG.

5. SB 654 established a mechanism to implement and allocate environmental mitigation responsibility between California water agencies and the State for the implementation of the QSA. Costs for environmental mitigation requirements up to and not to exceed \$133,000,000 shall be borne by Imperial, the Coachella Valley Water District (hereinafter "CVWD"), and the San Diego County Water Authority (hereinafter "SDCWA"), with the balance to be borne by the State of California. Similarly, SB 654 limits the responsibility for payments by Imperial, CVWD, and SDCWA for Salton Sea restoration to \$30,000,000, except for the provisions under subdivision (c) of Section 2081.7 of the Fish and Game Code, subdivision (f) of Section 1013 of the Water Code, and subdivision (b) of Section 3 of SB 654. Section 3 of SB 654 further provides for the creation of a joint powers agreement to implement these provisions, and Imperial, CVWD, SDCWA, and DFG have executed a contract entitled "Quantification Settlement Agreement Joint Powers Authority Creation and Funding Agreement" (hereinafter "QSA-JPA").

6. Other agreements associated with the QSA cover actions by the Secretary of the Interior to manage deliveries of Colorado River water to Imperial and to Metropolitan to carry out QSA-related water transfers, including the transfers contemplated in this Agreement. The Department

is not a party to those agreements and has no contractual relationship with Interior regarding ordering and delivering Colorado River water.

7. The Colorado River Water Delivery Agreement among the Secretary of the Interior, Imperial, Metropolitan, CVWD, and SDCWA provides that, with respect to the up to 800,000 AF of conserved water to be made available to the Department pursuant to Fish and Game Code Section 2081.7 (c)(1), up to 145,000 AF of that water may be used to meet benchmarks for reductions in agricultural use of Colorado River water contained in Interim Surplus Guidelines set forth in a record of decision by the Secretary of Interior in 2001. It is intended that the 145,000 AF be used for such purpose only in the event that Metropolitan is unable to secure a proposed agreement with Palo Verde Irrigation District for a transfer of agricultural water to Metropolitan. To the extent that all or some portion of the 145,000 AF is used to meet benchmarks, the quantity of water made available to DWR will be correspondingly decreased.

8. The Department and Metropolitan are contemporaneously with this Agreement entering into an agreement for the transfer to Metropolitan of up to 1.6 million AF of Colorado River water to the Department as contemplated by the QSA implementing legislation.

AGREEMENT

Article 1. For the purposes of this agreement:

- (a) “(c)(1) water” refers to the water described in Fish and Game Code Section 2081.7(c)(1) that Imperial is to transfer to the Department pursuant to this Agreement.
- (b) “(c)(2) water” refers to the water described in Fish and Game Code Section 2081.7(c)(2) that Imperial is to transfer to the Department pursuant to this Agreement.

Article 2. This Agreement shall be effective upon execution by the parties and approval of the Agreement by the Department of General Services, but not earlier than the Effective Date as defined in the QSA.

Article 3. The parties' rights and obligations under this Agreement are subject to and conditional upon compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) and any other applicable environmental and regulatory requirements. The parties recognize and acknowledge that the findings and/or implementation of mitigation obligations pursuant to CEQA/NEPA or other laws to mitigate for environmental impacts of the transfers provided for in this Agreement, including impacts on the Salton Sea, may preclude the Department from engaging in some part or all of the transfers of (c)(1) or (c)(2) water.

Article 3.1 If the environmental compliance required to be conducted by the Department under this Agreement requires, as to any or all of the water to be transferred, use of a method of conservation different from that selected by Imperial in its sole discretion pursuant to Section 2081.7(c) of the Fish and Game Code be, Imperial shall not be required under this Agreement to transfer that water.

Article 3.5 The parties' rights and obligations under this Agreement are conditional upon Imperial's obligations under the QSA-JPA referred to in Recital 5 remaining capped as set forth therein and upon the State's obligations therein being supported by sufficient appropriated funds or otherwise made binding in a manner satisfactory to Imperial.

Article 3.6 This Agreement shall remain in effect only so long as the Department's agreement with Metropolitan, referred to in Recital 7, and the QSA, referred to in Recital 1, remain in effect.

Article 4. Upon request by the Department, Imperial shall make (c)(1) water available to the Department at Imperial Dam for transfer by the Department in amounts set forth for each year in Attachment A, upon a schedule within each year to be determined by the Department. The Department may request an amount different from the amounts set forth in Attachment A pursuant to subsequent agreement among the Department, Imperial, and Metropolitan amending Attachment A or if the

Department has found a lesser request to be necessary for environmental protection or compliance purposes. It is understood and agreed that the Department need not request (c)(1) water if Metropolitan does not request from the Department the amount specified in Attachment A.

- a. Imperial shall submit water order requests to the Secretary of the Interior and proof of acceptance thereof to entitle Metropolitan to receive the transfer of (c)(1) water so requested on a schedule within the year acceptable to the Department. It is understood that Metropolitan will divert the water from Lake Havasu at the intake to its Colorado River Aqueduct.
- b. Should Imperial use any of the (c)(1) water to meet benchmarks for reduction in agricultural water use pursuant to the Colorado River Water Delivery Agreement to which the Department is not a party, Imperial shall promptly so notify the Department of the amount of water used for this purpose, and such amount shall be deducted from the amount available in the applicable year in Attachment A. If such use occurs in a year on Attachment A where the applicable amount is zero, the deduction shall be from the year 2017 amount on Attachment A. Imperial shall transfer the benchmark water to the Department for retransfer to Metropolitan on the same terms as the (c)(1) water.
- c. Upon water being made available to the Department for diversion by Metropolitan as requested, the Department shall pay Imperial \$175 per AF of water made available. This price shall be adjusted annually from September 1, 2003, for inflation, in accordance with the changes in the gross domestic product implicit price deflator published by the U.S. Bureau of Economic Analysis.
- d. The Department shall provide Imperial with notice at least eighteen months prior to making its request for its first annual transfer of (c)(1) water.

- e. Imperial shall submit quarterly invoices, in triplicate and identified by the Department contract number, to the Department for payment for the water to be made available for the entire year. The Department shall pay for the water in equal quarterly installments independent of the delivery schedule selected within the year. The invoices shall be accompanied by copies of USBR annual delivery schedules documenting the quantity of (c)(1) water to be made available. Within 60 days of receipt of an invoice and accompanying documentation, the Department shall approve payment, in whole or in part. The Department shall notify Imperial in writing of the reason(s) why an invoice is disapproved in whole or in part. Following the Department's approval of an invoice, in whole or in part, the Department shall disburse the funds to Imperial within 60 days.
- f. The Department will reconcile its payments with the USBR's final accounting for the year of water actually made available, in accordance with Article V of the United States Supreme Court decree in *California v. Arizona* dated March 9, 1964, and shall credit or debit, as appropriate, any differences with the USBR's annual reduction accounting for Imperial's cap that differs from the annual transfer amount and make any adjustment against the next year's payment to Imperial.

Article 4.5 The acquisition by the Department of (c)(1) water, and Imperial's obligation to make (c)(1) water available, are conditional upon the Department's assuming responsibility for any and all environmental processes, environmental impacts, and mitigation costs, including those related to Salton Sea salinity, related to the use or transfer of (c)(1) water.

Article 5. Upon request by the Department, Imperial shall make (c)(2) water available to the Department at Imperial Dam for transfer by the Department in amounts set forth for each year in Attachment B, upon a schedule within each year to be determined by the Department. The Department may request amounts different from the amounts set forth in Attachment B pursuant to subsequent agreement among the

Department, Imperial and Metropolitan amending Attachment B or if Department has found a lesser request to be necessary for environmental protection or compliance purposes. It is understood and agreed that the Department need not request (c)(2) water if Metropolitan does not request from the Department the amount specified in Attachment A.

- a. Imperial shall submit water order requests to the Secretary of the Interior and proof of acceptance thereof to entitle Metropolitan to receive the transfer of (c)(1) water so requested on a schedule within the year acceptable to the Department. It is understood that Metropolitan will divert the water from Lake Havasu at the intake to its Colorado River Aqueduct.
- b. Imperial shall make (c)(2) water available to the Department at no cost to the Department, other than for the Department's payment of environmental and socioeconomic costs as set forth in this Agreement.
- c. The Department shall provide Imperial with notice at least twelve months prior to making its request for transfer of (c)(2) water.
- d. The Department shall not request transfer of, and Imperial shall not make available, any (c)(2) water under this Agreement unless the Secretary of the Resources Agency of the State of California has first found that such transfer is consistent with the preferred alternative for Salton Sea restoration developed pursuant to Fish and Game Code Section 2081.7(e)(2)(C).

Article 5.5 The acquisition by the Department of (c)(2) water, and Imperial's obligation to make (c)(2) water available, are conditional upon the Department's assuming responsibility for any and all environmental processes, environmental impacts, and mitigation costs relating to Salton Sea salinity related to the use or transfer of (c)(2) water.

- Article 6. Notwithstanding the requirements of Articles 4 and 5 that (c)(1) water and (c)(2) water shall be made available at Imperial Dam as to allow diversion at Metropolitan's Colorado River Aqueduct intake at Lake Havasu, the Department and Imperial may, by future agreement, designate a different location at which the (c)(2) water is to be made available, in order for the Department to implement mitigation measures related to the transfers under this Agreement. Making water available at an alternative location will likely require the use of facilities owned or under the control of Imperial. The Department and Imperial agree to negotiate in good faith such future agreement, the need for which will depend upon the mitigation measures that are actually developed.
- Article 6.5 The Department will mitigate for socioeconomic impacts of the transfer of (c)(1) and (c)(2) water created by Imperial through flowing to the extent that those impacts are identified in the report required by Section 2 of SB 277, referred to in Recital 1, and such impacts shall be determined pursuant to the process described in Attachment C.
- Article 7. Imperial shall cause the amount of (c)(1) and (c)(2) water made available to the Department each year at Imperial Dam to be separately identified in the accounting prepared by the USBR in accordance with Article V of the United States Supreme Court decree in *Arizona v. California* dated March 9, 1964. Imperial shall further cause such amount of water to be subtracted from USBR's approved deliveries to Imperial so it can be added to USBR's approved deliveries to Metropolitan at the intake to Metropolitan's Colorado River Aqueduct at Lake Havasu, through agreements to which the Department is not a party.
- Article 8. The term of this Agreement shall be from its effective date to December 31, 2018, but may be extended upon written agreement of the parties.
- Article 9. This contract is not assignable.
- Article 10. The parties shall exercise reasonable good faith efforts to resolve any dispute that may arise under this agreement, including non-binding mediation. In addition,

Imperial agrees to enter into good faith discussions with Metropolitan and the Department for purposes of considering an amendment of the schedules in Attachment A and Attachment B in a mutually satisfactory manner.

Article 11. Both parties hereto have participated in the drafting of all the provisions of this Agreement.

Article 12. All notices, requests, or demands under this Agreement shall be in writing, and shall be made to:

To Imperial: Imperial Irrigation District
Attn. General Manager
P.O. Box 937
Imperial, CA 92251

To the Department: Department of Water Resources
Attn.: Director

Address for mailing: P.O. Box 942836
Sacramento, CA 94236-0001

Address for delivery: 1416 Ninth Street
Sacramento, CA 95814-5515

Article 13. A party may change its address upon written notice to the other party.

Article 14. This Agreement, including any exhibits attached hereto, constitutes the final, complete, and exclusive statement of the terms of the Agreement between the parties, and supersedes all prior and contemporaneous understandings or agreements of the parties as to the matters contained herein.

Article 15. This Agreement may be amended only by written agreement of the parties.

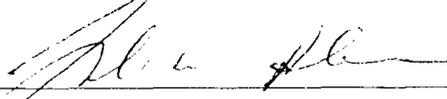
Article 16. No waiver of a breach, failure of condition, or any right or remedy contained or granted by the provisions of this Agreement shall be effective unless made in writing by the waiving party. No waiver of a breach, failure of a condition, or right or remedy shall be construed to be a waiver of any other breach, failure, right

or remedy. No waiver shall constitute a continuing waiver unless the writing so specifies.

- Article 17. Notwithstanding anything in this Agreement to the contrary, each party agrees to proceed with reasonable diligence and use reasonable good faith efforts to jointly defend any lawsuit or administrative proceeding by any person other than the parties challenging the legality, validity, or enforceability of this Agreement.
- Article 18. Notwithstanding any other provision of this agreement, nothing herein is intended to constitute consent by the State of California or any of its departments, agencies, commissions, or boards to suit in any court described in Article III of the U.S. Constitution. This agreement shall not waive, or be interpreted as waiving, the State of California's sovereign immunity under the Eleventh Amendment or any other provision of the U.S. Constitution in any present or future judicial or administrative proceeding.
- Article 19. This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.
- Article 20. If the performance, in whole or in part, of the obligations of the respective parties under this Agreement is hindered, interrupted, or prevented by wars, strikes, lockouts, fire, acts of God or by other acts of military authority, or by any cause beyond the control of the respective parties hereto, whether similar to the causes herein specified or not, such obligations of the respective parties under this Agreement shall be suspended to the extent and for the time the performance thereof is affected by any such act. Upon the cessation of any such hindrance, interruption, or prevention, both parties shall become obligated to resume and continue performance of their respective obligations under this Agreement. Notwithstanding any act described in this Article, the parties shall diligently undertake all reasonable effort to perform this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

IMPERIAL IRRIGATION DISTRICT



Signature

Date: 10/10/03

PRESIDENT

Title

Approved as to legal form and sufficiency:



General Counsel

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Date: 10/10/03



Interim Director

Attachment A

"(c)(1)Water"

QSA Agreement Year	Calendar Year	Salton Sea Restoration Increment (KAF)	ISG Backfill*
1	2003	0	
2	2004	0	
3	2005	0	
4	2006	0	up to 25 KAF
5	2007	0	
6	2008	20	
7	2009	40	up to 50 KAF plus any unused from 2006
8	2010	60	
9	2011	80	
10	2012	100	up to 70 KAF plus any unused from 2006 and 2009
11	2013	100	
12	2014	100	
13	2015	100	
14	2016	100	
15	2017	100	

* Not to exceed 145 KAF in the aggregate, and not to reduce inflow to the Salton Sea by more than 72.5 KAF in the aggregate.

Attachment B

"(c)(2) Water"

QSA Agreement Year	Calendar Year	Salton Sea Mitigation Increment (KAF)
1	2003	5
2	2004	10
3	2005	15
4	2006	20
5	2007	25
6	2008	25
7	2009	30
8	2010	35
9	2011	40
10	2012	45
11	2013	70
12	2014	90
13	2015	110
14	2016	130
15	2017	150

Attachment C

The purpose of this Attachment C is to provide guidelines for the estimation and measurement of socioeconomic impacts from land fallowing and to establish the timeline for implementation of defined tasks assigned to the Economists Panel (“Panel”) established pursuant to Article 6.5. The Panel shall conduct its studies in accordance with the guidelines and timelines presented below.

Estimation and Measurement of Socioeconomic Impacts

The Panel shall develop and implement a Socioeconomic Methodology to estimate and measure the annual and cumulative socioeconomic impacts of land fallowing through the development and use of a Regional Economic Model, as corroborated by evidence from available data on countywide economic conditions and supplemental economic studies of the income and employment of third parties, and evaluated for reliability by standard sensitivity analysis techniques.

1. *Regional Economic Model.* Regional Economic Model shall be based on any necessary adjustments of the standard IMPLAN Model for the specific economic circumstances of Imperial County and shall include the following considerations in the construction of the Social Accounting Matrix (SAM):
 - (a) The Panel shall identify the major industries in Imperial County and eliminate any sectors not relevant to the Imperial County economy from the national version of IMPLAN.
 - (b) The Panel shall review and adjust, where necessary, the pattern of industry purchases of capital, labor and intermediate goods to reflect any differences between the structure of the economy of Imperial Valley and the structure of the SAM of the national version of IMPLAN. In considering adjustments to the coefficients of the agricultural sector, the Panel shall consider relevant data available from California and Arizona cooperative extension reports, direct survey evidence, and other credible sources.
 - (c) The Panel shall consider adjustments to the national expenditure coefficients from the national version of IMPLAN based on credible information pertaining to the expenditure patterns of recipients of capital and labor income in Imperial County.
 - (d) The Panel shall consider adjustments to the local and state government coefficients in the national version of IMPLAN based on credible information available from Imperial County governmental agencies and the California Franchise Tax Board.
 - (e) The Panel shall balance any adjustments made to the SAM by a commonly accepted method.

2. *Estimation of Socioeconomic Impacts.* The Panel shall use the Regional Economic Model to estimate the annual and cumulative third party socioeconomic impacts of land fallowing for the specific circumstances of Imperial County including the following considerations:
- (a) Third-party impacts are defined as (i) changes in the after-tax income of individuals or entities residing in Imperial County not participating in the IID land fallowing program; and (ii) changes in the tax receipts of local governments within Imperial County.
 - (b) The Panel's determination of the crop acreage fallowed under the IID fallowing program shall be based on a negotiated method of utilizing information from cropping history of land fallowed, cropping patterns after land re-enters production, and other relevant information related to the economic conditions of crop markets and other relevant factors influencing cropping patterns.
 - (c) The Panel's determination of crop yields for land fallowed shall be based on a negotiated method using average crop yields in Imperial Valley as adjusted by credible evidence indicating that the crop yields of fallowed lands are expected to differ from average countywide crop yields.
 - (d) The Panel's determination of crop revenues from fallowed land shall be based on the average price for the crop fallowed (unless credible evidence can be generated regarding crop prices on fallowed lands) and the adjusted crop yield of fallowed land determined pursuant to 2(c).
 - (e) Determination of socioeconomic impact of land fallowing shall also consider the economic stimulus within Imperial County from contract payments received for land fallowing. The Panel's determination shall consider the implications of the mix of resident/nonresident landowners participating in the land fallowing program and the landowner/tenant split of IID land fallowing payments. The estimate of the economic stimulus shall also consider pro forma income tax liabilities of recipients of IID land fallowing payments. The Panel shall develop a method for annualizing any up front payments receipts by participants in an IID land fallowing program. The Panel shall also consider how the recipient of any up front payments may affect savings and current consumption and the pattern of expenditures. If there is credible evidence that recipients of IID land fallowing payments would invest in farming capital, then the Panel shall consider the impact of such investment on the economy of Imperial Valley.
 - (f) Estimates of the impacts of land fallowing shall also include the stimulus effect of other components of IID land fallowing program, including dust/weed mitigation, IID program administration and environmental mitigation. Impact measurement shall also consider the stimulus effect of government grants for public works and business investment

programs to facilitate economic development, but only if made available primarily to offset the socioeconomic impacts of land fallowing.

- (g) Estimates of the impact of IID land fallowing on local tax revenues shall consider the impact of the IID land fallowing program on local tax bases.
 - (h) Determination of socioeconomic impact of land fallowing shall also consider credible evidence concerning the impact of the land fallowing program on land productivity.
 - (i) Calculation of socioeconomic impacts shall also include a sensitivity analysis of model outputs using a method to be negotiated. Sensitivity analysis is intended to assess the credibility of model outputs resulting from uncertainties about the value of key parameters in the regional economic model. Analysis may also consider qualitative factors such as specification of production functions, role of technological change and other capital investments, and other factors.
3. *Comparison of Estimated Impacts with County Economic Statistics.* Estimates of the socioeconomic impacts of land fallowing shall be corroborated with a negotiated method of examining evidence from countywide economic data on income, employment, and other relevant economic data. The negotiated method shall consider the statistical validity of testing the estimated magnitude of the socioeconomic impacts of land fallowing with countywide data. If the examination of county economic statistics provides statistically reliable information that the estimates from the Regional Economic Model are materially inaccurate, then the Panel shall make any necessary adjustments to the Regional Economic Model.
4. *Longitudinal Analysis.* The longitudinal study undertaken pursuant to Section 14.5(c)(vi) shall consider individuals providing labor and material inputs to farmers in the Imperial Valley. The study shall examine the incidence and duration of unemployment resulting from fallowing, any adjustments made by businesses providing agricultural services, and other factors. Any credible evidence from longitudinal studies shall be considered in determining whether there should be an adjustment in the funding requirements of the Local Entity.

Timeline for Implementation of Defined Tasks

The Panel shall conduct their studies within the timelines presented below.

- 1. *Development of Regional Economic Model.* The Panel shall complete the development of the Regional Economic Model based on any adjustments made pursuant to 1(a)-(e) above within 45 Calendar Days of the commencement of work.
- 2. *Development of Necessary Methods to Estimate Socioeconomic Impacts.* Within 60 Calendar Days of the commencement of work, the Panel shall submit to the Local Entity and the Authority a written report summarizing the design and identification of necessary

information for the methods required above for the estimation of socioeconomic impacts of land fallowing, including:

- a. the method and information to be used in determining crop acreage fallowed in accordance with Section 2(b)(above);
 - b. the method and information to be used to adjust crop yields for specific lands fallowed relative to the countywide average of crop yields in accordance with 2(c) above;
 - c. any evidence to be relied up to estimate that crop prices for fallowed lands differ from countywide average crop prices in accordance with 2(d) above,
 - d. the methods and information to be used to estimate the economic stimulus within Imperial County from contract payments made for land fallowing in accordance with 2(e) above;
 - e. the methods and information to be used to estimate the economic stimulus from other components of IID fallowing in accordance with 2(f) above;
 - f. the methods and information to be used to estimate the impact of IID land fallowing on local tax revenues in accordance with 2(g) above;
 - g. the methods and information to be used to consider the impact of land fallowing on land productivity in accordance with 2(h) above;
 - h. the specification of the procedures to be relied upon to conduct the sensitivity analyses in accordance with 2(i) above; and
 - i. identification of the specific economic statistics and methods to be used to corroborate the estimated socioeconomic impacts of land fallowing in accordance with 3 above.
3. *Initiation of Longitudinal Study.* Within 75 Calendar Days of the commencement of work, the Panel shall submit to the Local Entity and the Authority a written report describing the study design, anticipated budget, and timing of the longitudinal study to be undertaken pursuant to Section 14.5(c)(vi). The Local Entity and the Authority must approve the proposed study before the Panel can proceed with its study plans.
4. *Initial Estimates of the Annual and Cumulative Socioeconomic Impact of Land Fallowing.* Within 120 Calendar Days of the commencement of work, the Panel shall provide the Local Entity with a draft report of the estimated Annual and Cumulative Impact of Land Fallowing through Agreement Year 15. The report shall discuss how information expected to become available in subsequent years may require adjustments to the Panel's initial estimates.
5. *Annual Reporting.* The Panel shall submit an annual report on updated estimated and measured socioeconomic impacts of land fallowing as provided in Section 14.5(c)(ix). The annual report shall include a written work plan and proposed budget for the Panel's activities in the following fiscal year.

AGREEMENT FOR ACQUISITION OF CONSERVED WATER

by and between

IMPERIAL IRRIGATION DISTRICT,

a California irrigation district ("IID"),

and

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA,

a California metropolitan water district ("MWD")

Dated: October 10, 2003

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**AGREEMENT FOR ACQUISITION OF CONSERVED WATER BETWEEN IMPERIAL
IRRIGATION DISTRICT AND THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA**

THIS AGREEMENT FOR ACQUISITION OF CONSERVED WATER ("**Agreement**") is made and entered into this 10th day of October, 2003, by and between IMPERIAL IRRIGATION DISTRICT, a California irrigation district ("**IID**"), and THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, a California metropolitan water district ("**MWD**"), each of which is at times referred to individually as "**Party**" and which are at times collectively referred to as "**Parties**."

RECITALS :

A. IID is an irrigation district organized under the California Irrigation District Law, codified at §§ 20500 et seq. of the California Water Code, and delivers Colorado River water in Imperial County, California for irrigation and potable purposes.

B. MWD is a metropolitan water district organized under the California Metropolitan Water District Act, § 109-1 of the Appendix to the California Water Code, and delivers Colorado River water in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura Counties, California for domestic and irrigation purposes.

C. This Agreement is one of several agreements executed and delivered as of the date hereof by the Parties and by other agencies, including Coachella Valley Water District ("**CVWD**"), pursuant to the Quantification Settlement Agreement among the Parties and CVWD dated as of October 10, 2003 (the "**QSA**"), which settles a variety of long-standing disputes regarding the priority, use and transfer of Colorado River water and establishes the terms for the further distribution of Colorado River water among these entities for up to seventy-five (75) years based upon the water budgets set forth therein.

D. The Parties do not intend to, and under the Agreement do not in any way, transfer, assign, encumber, or grant to each other any ownership interest in or control over any of each other's water rights.

E. The Parties intend that this Agreement shall become effective and commence only after compliance with the California Environmental Quality Act, California Public Resources Code §§ 21000 et seq. ("**CEQA**"), and the National Environmental Policy Act, Title 4, United States Code §§ 4321 et seq. ("**NEPA**"), as applicable.

A G R E E M E N T :

NOW THEREFORE, in consideration of the covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, IID and MWD agree as follows:

ARTICLE 1 DEFINITIONS AND RULES OF CONSTRUCTION

1.1 **Incorporated Definitions.** The terms with initial capital letters and acronyms that are used in this Agreement shall have the same meanings as set forth in Section 1.1 of the QSA, unless the context otherwise requires.

1.2 **Additional Definitions.** As used in this Agreement, in addition to the QSA defined terms, the following terms shall have the meanings set forth below:

(1) **Defensive Transfer Agreement.** An agreement by IID to transfer water that meets each of the following requirements: (i) the agreement is reached by IID in response to the threat of a decision or order by a federal or state agency or tribunal acting within its jurisdiction and authority and at least one element of the threatened order or decision would, if issued, (a) involve a determination that IID was not reasonably and beneficially using its water supply or that IID's water supply should be reallocated to another party, class of users, region, purpose or use; and (b) result in a decrease in IID's annual Consumptive Use entitlement in an amount not less than the quantity to be transferred; (ii) IID has reasonable grounds to believe that the threat is substantive and that the threatened decision or order could be entered or imposed; and (iii) the proposed transferee is not a party that has commenced or is participating adverse to IID in a proceeding that is the source of the threatened decision or order.

(2) **Exempt Transfer.** A transfer of water by IID permitted by Section 16.1(1)(ii) of this Agreement that: (i) in the aggregate with any other qualifying Exempt Transfers does not exceed thirty thousand (30,000) AFY; (ii) is to a transferee for use within Imperial County; and (iii) occurs after the Effective Date and does not, by its terms, require or contemplate continuation after the Termination Date.

(3) **First Fifty Thousand Acquisition.** As defined in the IID/CVWD Acquisition Agreement.

(4) **Make Available (and grammatical variations thereof).** Conserved Water will be deemed to have been Made Available to MWD in any Year hereunder by means of IID's corresponding reduction in that Year of its Consumptive Use at Imperial Dam in an amount equal to the Conserved Water to be acquired hereunder in that Year by MWD.

(5) **MWD Point of Diversion.** MWD's intake at Lake Havasu or such other point as MWD shall designate.

(6) **NEPA.** As defined in Recital E.

- (7) **Occasional Reduction Notice**. As defined in the IID/CVWD Acquisition Agreement.
- (8) **Permitted Transfers**. As defined in Section 16.1(1) below.
- (9) **Permanent Reduction Notice**. As defined in the IID/CVWD Acquisition Agreement, except that such notice shall be deemed to have been given to IID in the event that IID's obligation to Make Conserved Water Available to CVWD under the IID/CVWD Acquisition Agreement terminates as a result of CVWD's breach of that Agreement.
- (10) **Postponement Notice**. As defined in the IID/CVWD Acquisition Agreement.
- (11) **Option**. As defined in Section 6.2 below.
- (12) **QSA**. As defined in Recital C.
- (13) **RFR Exercise Notice**. As defined in Section 5.1(1) below.
- (14) **Right of First Refusal**. As defined in Section 5.1 below.
- (15) **Second Fifty-Three Thousand Acquisition**. As defined in the IID/CVWD Acquisition Agreement.
- (16) [Intentionally omitted].
- (17) **Term**. As defined in Section 7.1 below.
- (18) **Water Conservation Efforts**. The activity, program or project used to generate Conserved Water.

1.3 **Rules of Construction and Word Usage**. The provisions of Section 1.2 of the QSA are incorporated herein by reference, unless the context requires otherwise.

ARTICLE 2 BASIC PROVISION

Subject in all events to the specific terms and conditions of this Agreement:

(a) IID will compromise certain positions, amend the IID/MWD 1988 Agreement and 1989 Approval Agreement, and cause portions of the All-American Canal to be lined in order to create Conserved Water for acquisition by SDCWA, grant MWD a Right of First Refusal (defined below) on certain Conserved Water which is the subject of the IID/CVWD Acquisition Agreement, and grant MWD an Option to acquire certain Conserved Water.

(b) MWD will compromise certain positions, amend the IID/MWD 1988 Agreement and 1989 Approval Agreement, work cooperatively with IID to cause the State of California to

pay IID for lining a portion of the All-American Canal, and pay IID for any Conserved Water acquired under exercise of the Right of First Refusal or the Option.

(c) IID and MWD agree that at the termination of this Agreement, neither the terms of the Agreement nor the conduct of the Parties in performance of this Agreement confers upon the other any legal or equitable rights that would not have existed in the absence of this Agreement and the Parties' performance hereunder.

ARTICLE 3

IID/MWD 1988 AGREEMENT AND 1989 APPROVAL AGREEMENT

3.1 **IID/MWD 1988 Agreement and 1989 Approval Agreement.** The IID/MWD 1988 Agreement and the 1989 Approval Agreement shall be amended as set forth in the Amendment to IID/MWD 1988 Agreement and the Amendment to 1989 Approval Agreement.

ARTICLE 4

ALL-AMERICAN CANAL AND COACHELLA CANAL

4.1 **Conserved Water From the All-American Canal and Coachella Canal.** The Parties' rights and obligations with respect to Conserved Water resulting from the lining of the All-American Canal and the Coachella Canal shall be as set forth in the Allocation Agreement.

ARTICLE 5

RIGHT OF FIRST REFUSAL

5.1 **IID/CVWD Acquisition Right of First Refusal.** MWD shall have a right of first refusal ("**Right of First Refusal**") to acquire, in increments of five thousand (5,000) AFY, Conserved Water made available by IID for acquisition by CVWD, but for which CVWD exercises its rights under Sections 3.5 and 3.7 of the IID/CVWD Acquisition Agreement to Occasionally Reduce or Permanently Reduce the volume of Conserved Water it acquires from IID.

(1) **Notice.** Within fifteen (15) Business Days of receipt by IID of an Occasional Reduction or Permanent Reduction Notice from CVWD, IID shall provide a copy of the Occasional Reduction or Permanent Reduction Notice to MWD. Within sixty (60) Business Days after MWD's receipt from IID of an Occasional Reduction or Permanent Reduction Notice, MWD shall notify IID of MWD's decision to exercise its Right of First Refusal, including the specific volume of water for which the right is being exercised ("**RFR Exercise Notice**"). Any failure to provide IID with a timely RFR Exercise Notice shall be deemed a conclusive rejection by MWD of an election to exercise its Right of First Refusal to any Conserved Water identified in the corresponding Occasional Reduction Notice or Permanent Reduction Notice.

(2) **Exercise of Right of First Refusal.** Upon timely providing the RFR Exercise Notice, MWD shall be entitled to acquire, and IID shall Make Available to MWD, the identified volume of Conserved Water from IID on the same terms, conditions and rights

applicable to CVWD's acquisitions as set forth in Articles 2(a), 5 and 6 of the IID/CVWD Acquisition Agreement, except that: (i) the payment to IID shall be one hundred twenty-five dollars (\$125.00) per AF, in 1999 Dollars, plus an amount to be paid by MWD to CVWD in reimbursement of its prior payments to (or credits from) the QSA-JPA that are applicable to any Conserved Water Made Available to MWD pursuant to its RFR Exercise Notice, as determined under the CVWD/MWD Acquisition Agreement (or, in the event CVWD's prior payments to (or credits from) the QSA-JPA are not fully applicable to such Conserved Water, an amount to be paid by MWD directly to the QSA-JPA on behalf and for the account of CVWD, as determined under the CVWD/MWD Acquisition Agreement); and (ii) MWD shall be solely responsible for any and all additional environmental review process and mitigation costs attributed to exercise of the Right of First Refusal and MWD shall pay such costs to IID before or at the time IID Makes Available to MWD the Conserved Water.

ARTICLE 6

OPTION

6.1 [Intentionally omitted].

6.2 **MWD Option on Conserved Water.** MWD shall have an option ("Option") to acquire from IID four thousand (4,000) AF of Conserved Water in 2008, eight thousand (8,000) AF of Conserved Water in 2009, and up to ten thousand (10,000) AFY in each of 2010 through 2016 to the extent that CVWD could have acquired such volumes of Conserved Water from IID in such Years, but elects pursuant to Section 3.3 or Section 3.4 of the IID/CVWD Acquisition Agreement to acquire less Conserved Water in such years than the maximum volumes otherwise contemplated under Section 3.1 of such Agreement.

(1) [Intentionally omitted]

(2) **Notices.** Within fifteen (15) Business Days of receipt by IID of a Postponement Notice or an Adjustment Notice from CVWD, IID shall provide a copy of such Notice to MWD. Not later than one-hundred twenty (120) Business Days after MWD's receipt of such a Notice, MWD shall give IID written notice of its exercise of the Option with respect to the Year or Years affected by such Notice. Failure to timely provide such notice shall be a conclusive rejection by MWD of an election to exercise its Option for the Year or Years in question.

(3) **Exercise Payment for the Option.** Upon timely providing the Option exercise notice, MWD shall be entitled to acquire, and IID shall Make Available to MWD, the applicable volume of Conserved Water from IID on the same terms, conditions and rights applicable to CVWD's acquisitions as set forth in Articles 2(a), 5 and 6 of the IID/CVWD Acquisition Agreement, except that: (i) the payment to IID shall be one hundred twenty-five dollars (\$125.00) in 1999 Dollars per AF, plus an amount to be paid by MWD to CVWD in reimbursement of its prior payments to (or credits from) the QSA-JPA that are applicable to any Conserved Water Made Available to MWD pursuant to the Option, as determined under the CVWD/MWD Acquisition Agreement (or, in the event CVWD's prior payments to (or credits from) the QSA-JPA are not fully applicable to such Conserved Water, an amount to be paid by

MWD directly to the QSA-JPA on behalf and for the account of CVWD, as determined under the CVWD/MWD Acquisition Agreement); and (ii) MWD shall be solely responsible for any and all additional environmental review process and mitigation costs attributed to the exercise of the Option and MWD shall pay such costs to IID before or at the time MWD exercises the Option.

ARTICLE 7

TERM

7.1 **Term.** This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date.

7.2 **Effective Date.** The obligations of the Parties under Articles 2, 3, 4, 5, 6, 8, 15 and 16 hereof shall be contingent upon the occurrence of, and shall not become effective until, the Effective Date.

7.3 **Effect of Termination.** The provisions of Section 3.4(4) of the QSA are incorporated herein by reference, except that Section 16.2 of this Agreement shall survive termination of this Agreement as set forth herein.

ARTICLE 8

PAYMENTS

8.1 **IID/MWD 1988 Agreement.** MWD shall pay under the IID/MWD 1988 Agreement as set forth in that agreement, as amended.

8.2 **[Intentionally Omitted]**

8.3 **MWD Payments Upon Exercise of Right of First Refusal or Option.** MWD shall make payments to IID for Conserved Water Made Available to it by reason of its exercise of its Right of First Refusal or Option on the same terms, conditions and rights applicable to CVWD under Article 6 of the IID/CVWD Acquisition Agreement.

ARTICLE 9

ACQUISITION MECHANISM

9.1 **Acquisition Mechanism and Location.** IID performs its obligations to make Conserved Water available for MWD acquisition as contemplated by this Agreement by reducing its Consumptive Use at Imperial Dam by an amount equal to the Conserved Water to be acquired. When IID acts in that manner, IID has satisfied its obligation to make Conserved Water available for acquisition hereunder. MWD accepts responsibility for any arrangements and facilities necessary for it to divert the acquired Conserved Water at the MWD Point of Diversion. MWD has no duty to divert any or all of the Conserved Water. The payments by MWD to IID are for the conservation and acquisition of the Conserved Water, whether or not MWD actually diverts that Conserved Water.

9.2 **MWD's Scheduling Discretion.** MWD shall acquire Conserved Water Made Available to it in any Year between January 1 and December 31 of such Year. MWD shall have complete discretion within such Year on all matters relating to the scheduling of its diversions.

ARTICLE 10

PRIORITIES 3, 4, 5, 6 AND 7

10.1 **Limitation on Diversions.** IID and MWD have agreed to limit diversions under Priorities 3, 4, 5, 6 and 7 as explicitly set forth in the QSA.

ARTICLE 11

CONDITIONS TO MWD'S AND IID'S OBLIGATIONS

11.1 **Satisfaction of Conditions.** MWD's rights to acquire and pay for Conserved Water, and IID's obligations to undertake Water Conservation Efforts and Make Available Conserved Water for acquisition by MWD, are all subject to the satisfaction of the following conditions on or before the dates specified below. MWD and IID each agree to proceed with reasonable diligence and to use reasonable best efforts to satisfy those conditions for which it has responsibility.

(1) **QSA.** Each of the conditions precedent set forth in the QSA shall have been satisfied or waived as of the QSA Closing Date.

(2) **Related Agreements.** Each of the Related Agreements shall be in full force and effect as of the Effective Date.

11.2 **Written Waiver of Conditions.** The Parties may agree to waive in writing any one or more of the foregoing conditions, in whole or in part; provided, however, that neither Party shall waive review in accordance with CEQA or NEPA or other requirements under applicable laws.

11.3 **Extension by Agreement.** The Parties may agree to extend the date by which any condition must be satisfied or waived.

11.4 **Consequence of Failure of Conditions.** If the conditions in this Article are not timely satisfied or waived, then this Agreement will be void ab initio, and all rights granted by this Agreement will be terminated and forfeited.

ARTICLE 12

COMPLIANCE WITH ENVIRONMENTAL LAWS

12.1 **Compliance with CEQA and NEPA.** In executing this Agreement, the Parties recognize and acknowledge that the environmental review and assessment required by CEQA and NEPA have been completed.

12.2 **Compliance With Endangered Species Act and Other Applicable Laws.** In executing this Agreement, the Parties recognize and acknowledge that they have taken all steps necessary to assess whether the activities described in this Agreement may adversely impact threatened or endangered species, critical habitat or other environmental resources regulated pursuant to the federal Endangered Species Act, the California Endangered Species Act and other applicable state and federal laws relating to the protection of environmental resources (collectively, "Resource Laws"). To the extent required to implement the activities described in this Agreement in compliance with all Resource Laws, and as a condition to implementing such activities, the Parties have undertaken consultation with the U.S. Fish & Wildlife Service ("USFWS") for their respective areas of responsibility and have obtained all necessary permits, approvals and authorizations from USFWS, the California Department of Fish & Game, and other resource agencies.

12.3 [Intentionally omitted].

ARTICLE 13

FORCE MAJEURE

13.1 **Force Majeure.** The risk of a Force Majeure event, shall be borne by the Parties in accordance with the following terms; provided, however, that in no circumstance shall a Priority 3 Shortfall, as described in Article 11 of the IID/CVWD Acquisition Agreement, an extended drought (even of unexpected magnitude), or a new and unexpected environmental mitigation obligation be deemed to constitute a Force Majeure event within the meaning of this Article 13; and provided, further, that a disruption in MWD's ability to divert or to store Conserved Water shall not be a Force Majeure event within the meaning of this Article 13 if and to the extent MWD has the ability either to store or to divert such water. However, should an environmental problem arise which results in a Transfer Stoppage as defined in the QSA, then notwithstanding the above language, the Transfer Stoppage shall be treated as a Force Majeure event.

(1) IID shall be required, at its own expense, to take whatever steps are reasonable to cure or resolve any effects of a Force Majeure event on its ability to conserve and Make Available Conserved Water, and shall be relieved of any obligation to conserve or Make Available Conserved Water for acquisition by MWD until the cure or resolution is accomplished. MWD may withhold payments otherwise due until IID has cured or resolved such effects and Conserved Water again becomes available for acquisition by MWD.

(2) MWD shall be required, at its own expense, to take whatever steps are reasonable to cure or resolve a Force Majeure event on its ability to acquire, divert, transport, store or receive Conserved Water and, until such cure or resolution is accomplished, shall be relieved of its payment obligations to IID. IID may itself use, or make available for lawful acquisition by others, the Conserved Water for which MWD would otherwise have paid, and MWD shall have no right to acquire the Conserved Water until it has cured or resolved such effects and again becomes obligated to make payments to IID.

ARTICLE 14
EMINENT DOMAIN/TAKINGS

14.1 **Effect on Agreement.** If at any time during the term of this Agreement, any of the Conserved Water to be made available to MWD by IID pursuant to this Agreement is taken for any part of the remaining term of this Agreement by lawful exercise of the power of eminent domain by any sovereign, municipality, public or private authority or other person ("taking"), the terms of this Agreement shall not be affected in any way, except that for the period of the taking as to the Conserved Water taken only, IID shall be relieved of its obligation to Make such Conserved Water Available to MWD and MWD shall be relieved of its obligation to pay IID for such Conserved Water. Each Party hereby waives any right it may have under the provisions of Code of Civil Procedure § 1265.130 to petition the Superior Court to terminate this Agreement.

14.2 **Compensation for Taking.** The compensation paid for any taking of Conserved Water otherwise to be Made Available to MWD pursuant to this Agreement (the "subject Conserved Water") shall be separately assessed under Code of Civil Procedure § 1260.220(a) according to each party's interest as follows:

(1) MWD shall be entitled to:

(i) Any compensation paid for the amount attributable to the market value of the subject Conserved Water (or, with respect to any of MWD's unexercised Right of First Refusal or Option hereunder, the market value of such contingent interest in Conserved Water to the extent compensation is allowable therefor under applicable law) for the period from the date of the taking to the earlier of the date of the end of the taking or the term of this Agreement in excess of the present value at the date of the taking of the amounts that MWD would otherwise be obligated to pay to IID for the subject Conserved Water under this Agreement;

(ii) Any compensation paid for severance damage to MWD attributable to the taking of the subject Conserved Water (or contingent interest in Conserved Water); and

(iii) Any compensation paid for loss of goodwill to MWD attributable to the taking of the subject Conserved Water (or contingent interest in Conserved Water).

(2) IID shall be entitled to all other compensation paid, including but not limited to:

(i) Any compensation paid for the present value at the date of the taking of the amounts that MWD would otherwise be obligated to pay to IID for the subject Conserved Water under this Agreement;

(ii) Any compensation paid for severance damage to IID attributable to the taking of the subject Conserved Water; and

(iii) Any compensation paid for the loss of goodwill to IID attributable to the taking of the subject Conserved Water.

(3) Nothing in this Article 14 shall affect any right of either Party to relocation assistance benefits.

(4) Nothing in this Article 14 shall affect the rights or claims of either Party with respect to a taking of some or all of its water rights, including Colorado River water rights.

ARTICLE 15 MISCELLANEOUS

15.1 **Retention of Water Rights; No "Property" Rights in Water Rights Created Hereunder.** This Agreement does not in any way transfer, assign, encumber, or grant to MWD any ownership interest in or control over any water rights held by IID, and does not in any way transfer, assign, encumber, or grant to IID any ownership interest or control over any of water rights held by MWD. IID and MWD covenant and agree not to assert against each other any such interest in or control over water rights of the other Party.

15.2 **Acquisition of Colorado River Water.** During the Term of this Agreement, IID and MWD each consent to the other acquiring Colorado River water from any person on any terms; provided, however, that each Party reserves the right to object to any such acquisition on the sole basis that the proposed acquisition would materially reduce the water otherwise available to it under the QSA.

15.3 **Re-Transfer.** MWD may not re-transfer Conserved Water acquired from IID pursuant to Articles 5 and 6 hereof, but MWD may exchange such Conserved Water for other water supplies of like quantity if the exchange obligation of each party to the exchange is fulfilled within a single Year. There shall be no limitation hereunder on MWD's right to exchange water where other sources of water are available in sufficient quantity to effect the exchange. MWD will provide IID with information regarding any exchange where such other sources are not available in sufficient quantity so that water acquired pursuant to Articles 5 or 6 hereof must be used in whole or in part for such exchange, such that IID is able to timely determine MWD's compliance with this provision. MWD's delivery of Conserved Water acquired from IID to its member agencies on the same terms and conditions that it delivers Colorado River water otherwise diverted by MWD shall not be considered a re-transfer.

15.4 **Calendar-Year Limitation.** MWD's right to acquire Conserved Water under this Agreement is not cumulative, and MWD has no right to any such Conserved Water that it does not divert within the Agreement Year. Thus, if MWD fails to divert all of the Conserved Water to which it is entitled under this Agreement in any one Agreement Year, the amount which MWD is entitled to acquire (and the amount that IID is obligated to make available under this Agreement) in any other Agreement Year is unaffected.

15.5 **Shortage Years.** In the event that the Colorado River water available to IID in any Year would be less than the amount necessary to satisfy IID's present perfected right for that Year, the Conserved Water otherwise to be made available to MWD under the provisions of

Articles 5 and 6 hereof may be retained by IID to an extent up to but not greater than the amount needed to satisfy such right. A quantity of Conserved Water equal to that retained by IID under this provision shall be made available to MWD in the first Year when doing so would not cause IID's present perfected right to be unsatisfied in such Year. No payments will be due from MWD with respect to any Conserved Water retained by IID pursuant to this Section 15.5 until such water is made available to MWD.

ARTICLE 16

PEACE TREATY

16.1 Peace Treaty Elements

(1) Before the start of Year 21, IID shall make no transfers of water other than "Permitted Transfers," which shall be limited to: (i) transfers contemplated under Section 2.1 of the QSA, (ii) transfers that qualify as Exempt Transfers, (iii) transfers made under a qualifying Defensive Transfer Agreement, and (iv) transfers of up to one million six hundred thousand (1,600,000) AF in the aggregate to the California Department of Water Resources, as referenced in the QSA Legislation so long as MWD has not provided notice to IID that DWR has breached its agreement with MWD related to such transfers.

(2) During the Term of this Agreement, unless and until IID enters into an agreement or otherwise seeks to transfer water in a transaction that does not qualify as a Permitted Transfer, MWD shall not (i) pursue any legislative, administrative or judicial proceeding, or take any other action that would reduce IID's Consumptive Use entitlement, or (ii) divert any water that IID is ordered to conserve as the result of a challenge to IID's water supply; provided, however, that MWD may at any time challenge a proposed IID transfer, on any grounds, so long as that challenge is limited in scope to whether the proposed transfer is legally or contractually permitted. IID and MWD do not agree whether the above requirement of Section 16.1(2)(ii), that MWD shall not "divert any water that IID is ordered to conserve," precludes MWD from diverting water which is made available by an order that IID reduce its Consumptive Use. Any dispute over the interpretation of this phrase of Section 16.1(2)(ii) shall be resolved under the binding arbitration process set forth in Section 17.2 of this Agreement and the arbitrators shall resolve any such dispute without regard to parol evidence.

(3) IID shall provide MWD with sixty (60) days' prior written notice of any proposed transfer of Colorado River water by it, other than transfers contemplated under Section 2.1 of the QSA, including a description of the volume of water proposed to be transferred and an explanation why IID believes that the transfer would be permitted hereunder, upon the occurrence of any of the following events:

(i) IID has determined that there exist conditions warranting a Defensive Transfer Agreement;

(ii) IID has determined to explore whether to make a new transfer of any kind, in which event notice shall be given before IID discusses a possible transfer with any potential transferee;

- (iii) IID has entered into a transfer agreement; or
- (iv) IID has sought approval of a transfer or any aspect thereof.

(4) IID shall provide MWD with the first opportunity to be the transferee under any proposed Defensive Transfer Agreement. Upon notice by IID that it is interested in obtaining an offer for a Defensive Transfer Agreement, MWD shall have ninety (90) days to submit such an offer to IID. Upon receipt of MWD's offer, if one is made: (i) IID shall accept or not accept the offer, but shall in no event solicit competing offers from any other person or entity if MWD's offer is to acquire transferred water at the same per acre-foot price contemporaneously being paid or to be paid by SDCWA under the 1998 IID/SDWCA Transfer Agreement (an "SDCWA Offer"); or (ii) in the event MWD does not make an SDCWA Offer within the ninety (90) day period, IID shall, in its sole discretion, be free to seek, and to accept or reject, offers for Defensive Transfer Agreements from any person or entity, including MWD.

(5) Any dispute between IID and MWD as to whether a proposed transfer as to which IID has given timely notice pursuant to subsection (3) above constitutes a Defensive Transfer Agreement shall be settled promptly by binding arbitration, as provided in Section 17.2, commenced within thirty (30) days after written notice is provided by IID to MWD that, notwithstanding MWD's objections to IID's explanation provided pursuant to subsection (3) above, IID believes the proposed transfer meets the requirements for a Defensive Transfer Agreement.

16.2 During the Term of this Agreement and for six (6) years thereafter, MWD covenants that in dealing directly with IID, MWD shall conclusively presume that any water conserved for transfer or acquisition or used by IID for environmental mitigation purposes through Temporary Land Fallowing or crop rotation was conserved by IID in the same volume as if conserved by efficiency improvements such as by reducing canal seepage and spills or by reducing surface or subsurface runoff from irrigated fields. Also, during the Term of this Agreement and for six (6) years thereafter, MWD covenants that in any administrative, judicial or legislative proceeding involving evaluation or assessment of IID's use of water, MWD will not oppose (but shall not be required to support) IID's position that any water conserved for transfer or acquisition or used by IID for environmental mitigation purposes through Temporary Land Fallowing or crop rotation must be conclusively presumed to have been conserved by IID in the same volume as if conserved by efficiency improvements, such as by reducing canal seepage and spills or by reducing surface or subsurface runoff from irrigated fields. MWD further covenants that it will not oppose (but shall not be required to support) any effort by IID to cause any administrative, legislative or judicial body evaluating or assessing IID's use of water during the Term of this Agreement and for six (6) years thereafter to make the same conclusive presumption. In addition, MWD covenants that, during the term of the QSA and for six (6) years thereafter, MWD will not support (but shall not be required to oppose) in any forum, including any activity before any legislative, administrative or judicial body, any proposal to require the creation of Conserved Water for acquisition or transfer by IID after December 31, 2017 through the use of Temporary Land Fallowing, permanent land fallowing or crop rotation. MWD also agrees that it will not oppose (but shall not be required to support) IID's position that it has the right to Consumptive Use of Colorado River Water or IID created Conserved Water to mitigate environmental impacts resulting from the acquisition or transfer of Conserved Water

contemplated by the QSA. MWD does not oppose (but shall not be required to support) IID's position that IID has the right to create all Conserved Water by efficiency improvements without providing any mitigation water after Calendar Year 2017, as reflected on the Compromise IID/SDCWA and QSA Delivery Schedule attached as Exhibit A.

ARTICLE 17

DISPUTE RESOLUTION

17.1 **Nature of Dispute or Claim.** Disputes between IID and MWD arising under this Agreement shall be resolved in accordance with the procedures described in this Article 17.

(1) Disputes between the Parties on the following subjects shall be resolved under the binding arbitration process set forth in Section 17.2: (i) the amount of any payment claimed by IID to be due and owing from MWD; (ii) the calculation or application of the Inflation Index; (iii) the reasonableness of steps taken by MWD or IID to cure or resolve the effects of a Force Majeure event under Article 13; and (iv) fulfillment of the qualifying requirements for a proposed Defensive Transfer Agreement.

(2) All other disputes and claims arising under this Agreement shall be resolved in an action or proceeding between the Parties, subject to the terms and conditions set forth in Section 17.3, unless otherwise mutually agreed.

17.2 **Arbitration.** Disputes on the subjects specified in Section 17.1 that cannot be resolved by agreement shall be resolved through binding arbitration conducted in a Neutral County or such other location as the Parties may agree.

(1) An arbitration proceeding may be initiated by either Party sending a demand for arbitration to the other Party in conformance with the Notice provisions set forth in Section 20.6 of this Agreement. The Parties shall impanel a group of three arbitrators by each designating an arbitrator of their choice who shall then select the third panel member. If the two arbitrators appointed by the Parties cannot agree on the selection of a third arbitrator within ten (10) Business Days after their designation, the third arbitrator shall be selected by the presiding judge of the Superior Court in the county in which the proceeding will be held. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. The arbitrators shall take an oath of impartiality prior to the commencement of the arbitration proceeding. The Parties shall use their reasonable best efforts to conclude the arbitration proceeding within ninety (90) Business Days of the selection of the third panel member.

(2) The arbitrators shall conduct the proceeding in accordance with the procedural laws of California, and shall determine the rights and obligations of the Parties in accordance with substantive state and, if applicable, federal law. Discovery shall be governed by the California Code of Civil Procedure ("CCP"), with all applicable time periods for notice and scheduling provided therein reduced by one-half (½). Notwithstanding the preceding sentence, the arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration

Association. All issues regarding compliance with discovery requests shall be decided by the arbitrators. A decision by at least two out of the three arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

(3) The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party whom the decision is against. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the other Party's costs.

17.3 Actions or Proceedings Between the Parties. Disputes on subjects other than those specified in Section 17.1(1) that cannot be resolved by agreement shall be resolved in an action or proceeding between the Parties subject to the following provisions.

(1) Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the CCP. Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to (i) being transferred to a Neutral County, or (ii) instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.

(2) Each party hereby:

(i) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;

(ii) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;

(iii) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and

(iv) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

(3) Nothing in this Section 17.3 shall impair or limit the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

ARTICLE 18
REMEDIES

18.1 **Specific Performance.** Each Party recognizes and agrees that the rights and obligations set forth in this Agreement are unique and of such a nature as to be inherently difficult or impossible to value monetarily. If one Party does not perform in accordance with the specific wording of any of the provisions in this Agreement applicable to that Party, or otherwise breaches, the other Party would likely suffer irreparable harm. Therefore, if either Party breaches this Agreement, an action at law for damages or other remedies at law would be wholly inadequate to protect the unique rights and interests of the other Party to this Agreement. Accordingly, in any court controversy concerning this Agreement, this Agreement's provisions will be enforceable in a court of equity by a decree of specific performance. This specific performance remedy is not exclusive and is in addition to any other remedy available to the Parties.

18.2 **Cumulative Rights and Remedies.** The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delays in exercising any such right or remedy, the non-breaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power, or privilege precludes any other or further exercise of a right, power, or privilege granted by this Agreement or otherwise.

ARTICLE 19
REPRESENTATIONS AND WARRANTIES

19.1 **IID's Representations and Warranties.**

(1) **Due Authority and Approval.** Subject only to any approvals and conditions contemplated under Article 1 of this Agreement and compliance with environmental laws pursuant to Article 2 of this Agreement: (i) IID has all legal power and authority to enter into this Agreement, to implement its Water Conservation Efforts, and to make the Conserved Water available for MWD acquisition on the terms set forth in this Agreement, and (ii) the execution and delivery of this Agreement and IID's performance of its obligations under the Agreement have been duly authorized by all necessary actions of IID, and no other act or proceeding by IID is necessary to authorize such execution, delivery, or performance.

(2) **Signatories.** The persons executing this Agreement on behalf of IID have full power and authority to bind IID to the terms of this Agreement. In addition, the persons signing this Agreement on IID's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on IID's behalf personally warrant and represent that they have reviewed this Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability.** Subject only to any approvals and conditions contemplated under Article 1 of this Agreement and compliance with environmental laws pursuant to Article 2 of this Agreement, this Agreement constitutes the valid and binding agreement of IID, enforceable against IID in accordance with the terms of the Agreement.

(4) **No Conflicts.** The execution and implementation of this Agreement do not violate or trigger default under any law or other agreement to which IID is subject.

(5) **No Pending or Threatened Disputes.** Except as disclosed in Exhibit B attached hereto, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to IID's knowledge, threatened against or affecting IID relating to the performance contemplated by this Agreement, including the adequacy of the water conservation efforts undertaken by IID, IID's making Conserved Water available for acquisition by MWD, and MWD's payment for such Conserved Water.

(6) **Notice of Developments.** IID agrees to give prompt notice to MWD if IID discovers that any of its own representations and warranties were untrue when made or determines that any of its own representations and warranties will be untrue as of the Effective Date.

19.2 **MWD's Representations and Warranties**

(1) **Due Authority and Approval.** Subject only to the approvals and conditions contemplated under Article 1 of this Agreement and compliance with environmental laws pursuant to Article 2 of this Agreement: (i) MWD has all legal power and authority to enter into this Agreement and to acquire the Conserved Water on the terms set forth in this Agreement, and (ii) the execution and delivery of this Agreement and MWD's performance of its obligations under the Agreement have been duly authorized by all necessary actions of MWD, and no other act or proceeding by MWD is necessary to authorize such execution, delivery, or performance.

(2) **Signatories.** The persons executing this Agreement on behalf of MWD have full power and authority to bind MWD to the terms of this Agreement. In addition, the persons signing this Agreement on MWD's behalf personally warrant and represent that they have such power and authority. Furthermore, the persons signing this Agreement on MWD's behalf personally warrant and represent that they have reviewed the Agreement, understand its terms and conditions, and have been advised by counsel regarding the same.

(3) **Enforceability.** Subject only to any approvals and conditions contemplated under Article 11 of this Agreement and compliance with environmental laws pursuant to Article 2 of this Agreement, this Agreement constitutes the valid and binding agreement of MWD, enforceable against MWD in accordance with the terms of the Agreement.

(4) **No Conflicts.** The execution and implementation of the Agreement do not violate or trigger default under any law or other agreement to which MWD is subject.

(5) **No Pending or Threatened Disputes.** Except as disclosed in Exhibit C attached hereto, there are no actions, suits, legal or administrative proceedings, or governmental investigations pending or, to MWD's knowledge, threatened against or affecting MWD relating

to the performance contemplated by this Agreement, including the adequacy of the water conservation efforts undertaken by IID, IID's Making Conserved Water Available for acquisition by MWD, and MWD's payment for such Conserved Water.

(6) **Notice of Developments.** MWD agrees to give prompt notice to IID if MWD discovers that any of its own representations and warranties were untrue when made or determines that any of its own representations and warranties will be untrue as of the Effective Date.

ARTICLE 20 GENERAL PROVISIONS

20.1 **No Third-Party Rights.** This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

20.2 **Counting Days.** Days shall be counted by excluding the first day and including the last day, unless the last day is not a Business Day, and then it shall be excluded. Any act required by this Agreement to be performed by a certain day shall be timely performed if it is completed before 5:00 .m. Pacific Time on that date, unless otherwise specified. If the day for performing any obligation under this Agreement is not a Business Day, then the time for performing that obligation shall be extended to 5:00 .m. Pacific Time on the next Business Day.

20.3 **Ambiguities.** Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

20.4 **Governing Law.** California law shall govern this Agreement and any dispute arising from the contractual relationship between the Parties under the Agreement; provided, however, that federal law shall be applied as appropriate to the extent that it bears on the resolution of any claim or issue relating to the permissibility of a proposed transfer under Article 16.

20.5 **Binding Effect; No Assignment.** This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. Neither Party may assign any of its rights or delegate any of its duties under this Agreement. Any Assignment or Delegation made in violation of this Agreement is void and of no force or effect.

20.6 **Notices.** All notices, requests, demands, or other communications under this Agreement must be in writing, and sent to both addressees of each Party. Notice will be sufficiently given for all purposes as follows:

- *Personal Delivery.* When personally delivered to the recipient. Notice is effective on delivery.

- *First-Class Mail.* When mailed first-class to the last address of the recipient known to the Party giving notice. Notice is effective five mail delivery days after it is deposited in a United States Postal Service office or mailbox.
- *Certified Mail.* When mailed certified mail, return receipt requested. Notice is effective on receipt, if a return receipt confirms delivery.
- *Overnight Delivery.* When delivered by an overnight delivery service such as Federal Express, charged prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.

Addresses for purpose of giving notice are as follows:

To IID:	Imperial Irrigation District 333 E. Barioni Boulevard P.O. Box 937 Imperial, California 92251 Attn: General Manager Telephone: (760) 339-9477
With a copy to:	Horton, Knox, Carter & Foote 895 Broadway El Centro, California 92243 Attn: John P. Carter, Chief Counsel Telephone: (760) 352-2821
To MWD:	The Metropolitan Water District of Southern California P.O. Box 54153 Los Angeles, California 90054 Attn: Chief Executive Officer Telephone: (213) 217-6000
With a copy to:	The Metropolitan Water District of Southern California P.O. Box 54153 Los Angeles, California 90054 Attn: General Counsel Telephone: (213) 217-6115

A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

20.7 **Entire Agreement.** This Agreement (including the exhibits and other agreements attached to or referenced in this Agreement) constitutes the final, complete, and exclusive statement of the terms of the agreement between the Parties pertaining to the acquisition of Conserved Water by MWD from IID, and supersedes all prior and contemporaneous understandings or agreements of the Parties. Neither Party has been induced to enter into this Agreement by, nor is either Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

20.8 **Time of the Essence.** Time is of the essence of and under this Agreement and of every provision thereof.

20.9 **Modification.** This Agreement may be supplemented, amended, or modified only by the agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by both Parties.

20.10 **Waiver.** No waiver of a breach, failure of condition, or any right or remedy contained in or granted by the provisions of this Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right, or remedy. No waiver of a breach, failure of condition, or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

20.11 **Joint Defense.** The Parties agree to proceed with reasonable diligence and use reasonable best efforts to jointly defend any lawsuit or administrative proceeding challenging the legality, validity, or enforceability of any term of this Agreement, or any Party's right to act in accordance with any of the terms of this Agreement.

IN WITNESS WHEREOF, IID and MWD have executed this Agreement as of the day and year first written above.

"IID"

IMPERIAL IRRIGATION DISTRICT, a
California irrigation district

By: [Signature]
Its: PRESIDENT

By: [Signature]
Its: SECRETARY

Approved as to form:

By: [Signature]
Its: Chief Counsel

"MWD"

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA, a California
metropolitan water district

By: [Signature]
Its: CEO

Approved as to form:

By: [Signature]
Its: GENERAL COUNSEL

EXHIBIT A

EXHIBIT A
COMPROMISE IID/SDCWA AND QSA DELIVERY SCHEDULE

Agmt Yr	Cal Yr	IID/SD (KAF)	IID/CVWD (KAF) ¹	IID/MWD (KAF)	Total Delivery (KAF)	Total Efficiency (KAF)	Following for Delivery (KAF)	Mitigation Following (KAF)	Total Following (KAF)
1	2003	10	0	0	10	0	10	5	15
2	2004	20	0	0	20	0	20	10	30
3	2005	30	0	0	30	0	30	15	45
4	2006	40	0	0	40	0	40	20	60
5	2007	50	0	0	50	0	50	25	75
6	2008	50	4	0	54	4	50	25	75
7	2009	60	8	0	68	8	60	30	90
8	2010	70	12	0	82	12	70	35	105
9	2011	80	16	0	96	16	80	40	120
10	2012	90	21	0	111	21	90	45	135
11	2013	100	26	0	126	46	80	70	150
12	2014	100	31	0	131	71	60	90	150
13	2015	100	36	0	136	96	40	110	150
14	2016	100	41	0	141	121	20	130	150
15	2017	100	45	0	145	145	0	150	150
16	2018	130	63	0	193	193	0	0	0
17	2019	160	68	0	228	228	0	0	0
18	2020	192.5	73	2.5	268	268	0	0	0
19	2021	205	78	5.0	288	288	0	0	0
20	2022	202.5	83	2.5	288	288	0	0	0
21	2023	200	88	0	288	288	0	0	0
22	2024	200	93	0	293	293	0	0	0
23	2025	200	98	0	298	298	0	0	0
24	2026	200	103	0	303	303	0	0	0
25	2027	200	103	0	303	303	0	0	0
26	2028	200	103	0	303	303	0	0	0
27-45	2029-2047	200	103	0	303	303	0	0	0
46-75	2048-2077	200	50	0	250	250	0	0	0

¹ or MWD if CVWD declines to acquire.

EXHIBIT B

EXHIBIT B

IID's Pending and Threatened Litigation Disclosure

The following actions, suits, legal or administrative proceedings, or governmental investigations are pending, or (to IID's knowledge) have been threatened relating to the performance of this Agreement. By listing the items here, IID does not imply that any of these matters have merit and, in fact, IID disputes the legitimacy of all the below matters. They are provided here simply as a disclosure of their existence or threat, per the Agreement.

1. United States Part 417 Proceeding (2003) -- IID is currently engaged in a dispute with the United States over IID's 2003 water order, with an appeal to the Secretary of the Interior from the Regional Director's Final Determination due to be filed later this month. The 2003 Part 417 review of IID will be terminated by the United States and IID's order approved as part of the QSA settlement.
2. United States Part 417 Proceeding (Future Years) -- Though IID disputes the legal ability of the United States to review IID's water use under Part 417, the United States contends that it has the right to review IID's water use under that regulation on a yearly basis. In future years such review is required to be in compliance with obligations of the United States in the QSA package of documents, and IID and the United States have reserved their litigation rights.
3. IID v. United States, et al. (Case No. 03 CV 0069W (JFS), Southern District California) This case pertains to IID's 2003 water order. It is currently stayed and will be dismissed as part of the overall QSA settlement.
4. Reasonable Beneficial Use Lawsuits/Actions By Junior Appropriators and Others -- Junior appropriators MWD and CVWD have threatened to sue IID over its reasonable beneficial use of water. The QSA settlement controls MWD's and CVWD's rights to commence such proceedings during the QSA. Other entities not constrained by the QSA may sue IID.
5. Morgan, et al. v. Imperial Irrigation District (Case No. L-01510, Superior Court of California, Imperial County)-- This is a lawsuit against IID and "All Persons Interested" brought by certain landowners in IID. This "Morgan Group" of plaintiffs consists of disgruntled landowners in the Imperial Valley who have asserted in this case, and/or in other places at other times, the following general issues: (a) they have "revoked" their status as beneficiaries and thus IID has no authority over Colorado River water; (b) IID has mismanaged its water right; (c) the landowners have the right to make their own deals with third parties to transfer water outside the IID service area; (d) IID cannot agree to the QSA without landowner consent; (e) methods being discussed by IID to implement the conservation programs required under the QSA documents are unfair and improper; (f) other similar complaints about IID and its management.
6. Imperial Valley Actions -- Many residents, landowners, farmers, and groups in the Imperial Valley are not in agreement with IID over the terms of the QSA, and have threatened to take action. The exact nature and extent of such possible action is unknown to IID.

7. Environmental Lawsuits/Actions -- Though the QSA and transfers were subject to extensive environmental review and provide for extensive environmental mitigation, various environmental groups and citizens have asserted that mitigation is inadequate or that the environmental documentation is inadequate. The exact nature and extent of such possible action is unknown to IID.

8. Lining Of All American Canal -- Many persons, both in the United States and in Mexico, appear to use groundwater that is being supplied by seepage from the All-American Canal. Lining will reduce access to seepage groundwater once the canal is lined. Persons have complained about this situation, and it is possible that such persons (and perhaps Mexico) will attempt to stop such lining.

9. Indian Tribes -- Certain Indian tribes border the Colorado River and have complained in the past to IID that any reductions in IID water orders so that more water can be taken by MWD or SDCWA at Parker Dam will adversely affect their power generation and their on-river wildlife habitat.

EXHIBIT C

EXHIBIT C

None, other than the matters referenced in Exhibit B.

**REVISED FOURTH AMENDMENT TO AGREEMENT BETWEEN IMPERIAL
IRRIGATION DISTRICT AND SAN DIEGO COUNTY WATER AUTHORITY
FOR TRANSFER OF CONSERVED WATER**

THIS REVISED FOURTH AMENDMENT TO THE AGREEMENT BETWEEN IMPERIAL IRRIGATION DISTRICT AND SAN DIEGO COUNTY WATER AUTHORITY (the "Amendment") dated as of October 10, 2003, by and between IMPERIAL IRRIGATION DISTRICT ("IID"), a California irrigation district and SAN DIEGO COUNTY WATER AUTHORITY ("Authority"), a California county water authority, amends that certain Agreement For Transfer of Conserved Water by and between Imperial Irrigation District and San Diego County Water Authority dated April 29, 1998 (the "Agreement"), and all previous amendments.

BACKGROUND

A. IID is a party to that certain Quantification Settlement Agreement ("QSA") among IID, Metropolitan Water District ("MWD") and Coachella Valley Water District ("CVWD"). The QSA and a number of other agreements defined in the QSA as Related Agreements (the "Related Agreements") will be executed by the parties to each of those Related Agreements, including, as applicable, the United States of America and the California Department of Water Resources ("DWR") upon completion of environmental review and satisfaction of a number of conditions. The QSA and the Related Agreements consensually establish the terms for the priority, use and distribution of Colorado River Water among IID, Authority, MWD and CVWD. The Related Agreements include, inter alia, the Agreement, the Agreement for Acquisition of Conserved Water By and Between Imperial Irrigation District and Coachella Valley Water District ("IID/CVWD Acquisition Agreement"), the Agreement for Acquisition of Conserved Water By and Between Imperial Irrigation District and The Metropolitan Water District of Southern California ("IID/MWD Acquisition Agreement"), the Amended and Restated Agreement Between The Metropolitan Water District of Southern California and the San Diego County Water Authority for the Exchange of Water, dated October 10, 2003 ("Exchange Agreement") and the Environmental Cost Sharing, Funding and Habitat Conservation Plan Development Agreement among CVWD, IID, and the Authority ("ECSA"), the Quantification Settlement Agreement Joint Powers Authority Creation and Funding Agreement ("QSA-JPA"), the Agreement for Transfer of Conserved Water By and Between Imperial Irrigation District and California Department of Water Resources ("IID/DWR Agreement"), the Agreement for Acquisition of Conserved Water By and Between the California Department of Water Resources and The Metropolitan Water District of Southern California ("DWR/MWD Acquisition Agreement"), and the Allocation Agreement Among the United States, IID, CVWD, MWD and the Authority ("Allocation Agreement").

B. This Amendment is to modify certain aspects of the Agreement to be consistent with the terms and conditions of the QSA and Related Agreements and to modify other aspects to temporarily lessen the environmental impacts of the transfer of Conserved Water from the IID to the Authority. This Amendment is expressly conditioned upon the satisfaction or waiver of all terms and conditions of the QSA and the occurrence of the QSA Effective Date as defined in the QSA.

C. All capitalized terms used and not otherwise defined herein shall have their respective meaning provided in the Agreement.

D. The Recitals to this Amendment and the Exhibits attached to this Amendment are a part of the terms of this Amendment.

CONDITIONS

1. Conditions to this Amendment. This Amendment is subject to the satisfaction of the following conditions on or before the dates specified below.

A. QSA. The QSA Effective Date, as defined in the QSA, has occurred by October 12, 2003.

B. Wheeling. The Authority and MWD have executed the Exchange Agreement on or before the QSA Closing Date as defined in the QSA.

C. SWRCB. The order of the State Water Resources Control Board conditionally approving the transfer of Conserved Water is modified as necessary to authorize the transfer consistent with this Amendment on or before October 31, 2003.

2. The parties agree that upon execution of this Amendment, and without regard to any conditions, each will act in good faith and exercise reasonable efforts to implement the Agreement as amended hereby. Upon satisfaction of all conditions precedent to this Amendment, the operative terms of this Amendment shall be effective and shall be governed by and construed in accordance with the laws of the State of California, without giving effect to the conflicts of laws principles thereof. This Amendment may be executed in any number of counterparts with the same effect as if the signatures thereto were upon one instrument. This Amendment constitutes an amendment and modification of the Agreement in accordance with § 18.9 of the Agreement and shall be read and construed with the Agreement as one instrument. Except as expressly amended hereby, the Agreement shall remain in full force and effect, and the parties hereby ratify, confirm and adopt the Agreement, as amended hereby.

TERMS

In consideration of the mutual covenants and agreements contained herein and for other good and valuable consideration and intending to be legally bound hereby, the IID and the Authority agree:

Article 1

Section 1.1(a) is modified by substituting the following definition:

"1.1(a) Actual Wheeling Rate – The rate per AF to be paid by the Authority to MWD as determined by agreement or arbitration, litigation or other dispute-resolution mechanism between the Authority and MWD for wheeling water from Lake Havasu to the Conveyance Path Terminus, calculated by dividing

the Agreement Year annual total of all required payments (exclusive of any fixed costs, and net of any benefit credits) by the difference between the total Agreement Year annual volume of Conserved Water transferred by the IID to the Authority less any Conveyance Losses from Lake Havasu to the Conveyance Path Terminus."

Section 1.1(c) is deleted.

Section 1.1(i) is modified by substituting the following definition:

"1.1(i) Agreement Year 1 – Calendar Year 2003."

Section 1.1(n) is deleted.

Section 1.1(bk) is modified by replacing it in its entirety by the following:

"(bk) IID Environmental Cost Ceiling. A cost that is not of a magnitude in Effective-Date Dollars that will exceed thirty million dollars (\$30,000,000.00)."

Section 1.1(cu) is modified to substitute *"in accordance with the ramp-up schedule set forth in modified § 3.1"* for the existing reference to *"by twenty thousand (20,000) AFY."*

Section 1.1(dc) is deleted.

Section 1.1(dv) is deleted.

Section 1.1(dw) is deleted.

Section 1.1 (ea) is modified to substitute *"(af)"* for *"(ag)."*

Section 1.1 (ec) is modified to substitute *"(ag)"* for *"(ah)."*

Section 1.1 (ed) is modified to substitute *"(ah)"* for *"(ai)."*

Section 1.1 (ee) is modified to substitute *"(ai)"* for *"(aj)."*

Section 1.1(eg) is deleted.

Section 1.1(eh) is deleted.

Article 2

No changes.

Article 3

Section 3.1 is in its entirety is replaced by substituting the following ramp up schedule and provision regarding the Stabilized Primary Quantity.

"Primary Transfer. Subject to satisfaction or waiver of the Contracting Landowner conditions of § 9.4, the quantity of Conserved Water transferred in Agreement Years 1 through 19 shall be as follows:

<i>Agreement Year</i>	<i>Quantity (AFY)</i>
<i>1</i>	<i>10,000</i>
<i>2</i>	<i>20,000</i>
<i>3</i>	<i>30,000</i>
<i>4</i>	<i>40,000</i>
<i>5</i>	<i>50,000</i>
<i>6</i>	<i>50,000</i>
<i>7</i>	<i>60,000</i>
<i>8</i>	<i>70,000</i>
<i>9</i>	<i>80,000</i>
<i>10</i>	<i>90,000</i>
<i>11</i>	<i>100,000</i>
<i>12</i>	<i>100,000</i>
<i>13</i>	<i>100,000</i>
<i>14</i>	<i>100,000</i>
<i>15</i>	<i>100,000</i>
<i>16</i>	<i>130,000</i>
<i>17</i>	<i>160,000</i>
<i>18</i>	<i>190,000</i>
<i>19</i>	<i>200,000</i>

Subject to satisfaction of the Contracting Landowner conditions of § 9.4, the Stabilized Primary Quantity will be two hundred thousand (200,000) AFY. The IID may not change the quantity of the Stabilized Primary Quantity once the amount has been established."

Section 3.2 is modified by replacing it in its entirety with the following:

"3.2 Discretionary Additional Transfers. Subject to the provisions of this section, if IID in its complete discretion wishes to transfer "Additional Available Water" between Agreement Year 1

through Agreement Year 18, it must offer that Conserved Water first to the Authority.

(a) Additional Available Water. "Additional Available Water" means that quantity of Conserved Water, if any, up to a maximum volume in any Agreement Year calculated by subtracting the ramp-up volume identified in modified § 3.1 for any Agreement Year from two hundred thousand (200,000) AFY. Additional Available Water does not include:

(i) Water that the IID transfers to MWD or CVWD under the QSA; or

(ii) Water conserved from the All-American Canal or Coachella Canal.

(iii) Water that IID transfers under the IID/DWR Agreement.

(b) Price. The price for Additional Available Water will be the same price as for the Primary Transfer Water transferred under § 3.1 concurrently.

(c) Procedure. The transfer of Additional Available Water shall proceed as follows:

(i) Notice to Acquirer. On or after January 1 of Agreement Year 2, on each occasion that it wishes to transfer Additional Available Water, the IID shall give a notice of its desire to transfer Additional Available Water ("Notice to Transfer"). The Notice to Transfer must contain the terms of the desired quantity, transfer start date, period over which the transfer would increase from the minimum to the maximum and any environmental, transportation, SWRCB approval, BOR approval or Landowner participation conditions.

(ii) Response to Notice; Meet and Confer. The Authority must either decline the offer of Additional Available Water, accept the terms and conditions contained in such Notice, respond with alternative acceptable terms and conditions, or meet and confer with the IID to determine whether mutually acceptable terms and conditions can be negotiated. The Parties have six (6) months from the giving of the Notice to Transfer to reach an agreement on the terms and conditions for the transfer of Additional Available Water or the Notice will be deemed rejected.

(iii) Condition Removal. Should the Parties agree that the transfer of Additional Available Water may be

conditioned on the satisfaction of environmental, transportation, SWRCB approval, BOR approval or Landowner participation conditions, the period for satisfaction of such conditions may not be longer than twenty-four (24) months from the date that the Parties reach agreement on the terms for transfer of the Additional Available Water. The Parties agree to proceed with reasonable diligence and use reasonable best efforts to satisfy any conditions for which a Party has accepted responsibility.

(iv) Start Date. The first day that Additional Available Water may be transferred to the Authority is the later of:

(A) January 1 of Agreement Year 3, or

(B) Six (6) months after the satisfaction of the last remaining condition referenced in § 3.2(c)(iii) above.

(v) Term. The term of transfer of Additional Available Water must end no later than the end of Agreement Year 18.

(vi) Waiver of Right to Acquire or Transfer. The failure of the Parties to negotiate acceptable terms and conditions for the transfer of Additional Available Water shall entitle the IID to give a "Notice of Waiver" which results in the Authority relinquishing any further rights as to a transfer of water under the Notice of Transfer which is the subject of the Notice of Waiver. If all of the agreed upon conditions for the transfer of Additional Available Water are not satisfied or waived, the IID shall be entitled to give a Notice of Waiver as to that Notice of Transfer.

New Section 3.5 is added in its entirety as follows:

"3.5 Early Transfer Water. In addition to any Conserved Water that IID may transfer to the Authority under §§ 3.1, 3.2, 3.3 or 3.4 herein, IID will transfer ten thousand (10,000) AF of Conserved Water in the manner set forth elsewhere in this Article 3 ("Early Transfer Water"). The Early Transfer Water shall be made available to the Authority at Imperial Dam in Calendar Years 2020, 2021 and 2022 as follows:

Calendar Year 2020: 2,500 AF

Calendar Year 2021: 5,000 AF

Calendar Year 2022: 2,500 AF

(a) Transfer Complete at Imperial Dam. IID effects a transfer of Early Transfer Water to the Authority under this Agreement by reducing its annual diversion (less return flows) from the Colorado River at Imperial Dam by an amount equal to the quantity of Early Transfer Water to be transferred to the Authority set forth in § 3.5. When the IID effects a transfer in that manner, the IID has satisfied its obligation to transfer such Early Transfer Water. The Authority accepts responsibility for the Early Transfer Water at Imperial Dam. The Authority assumes responsibility for all arrangements to divert and transport the Early Transfer Water to the Conveyance Path Terminus, including disruption or cost resulting from MWD conduct contrary to the provisions of the 1998 IID/SDCWA Transfer Agreement, the QSA or the Related Agreements.

(b) Authority's Scheduling Discretion. The Authority accepts the transfer of the Early Transfer Water beginning on January 1 of 2020, 2021 and 2022. The Authority has complete discretion within each Calendar Year for the requisite annual quantity on the scheduling of its diversions from the point of diversion to the Conveyance Path Terminus.

(c) Calendar-Year Limitation. The Authority's right to Early Transfer Water under this Amendment is not cumulative, and the Authority has no right to any quantity of Early Transfer Water that it does not divert within the Calendar Year that it is to be transferred. Thus, if the Authority fails to divert the Early Transfer Water to which it is entitled under this Amendment in any one Calendar Year, the amount to which the Authority is entitled (and the amount that IID is obligated to transfer under this Amendment) in any other Calendar Year is unaffected.

(d) Method of Conservation. IID may generate the Early Transfer Water in accordance with any method permissible under the 1998 IID/SDCWA Transfer Agreement or the QSA.

(i) Method of conservation. IID reserves complete discretion in determining how to create the Early Transfer Water in accordance with the 1998 IID/SDCWA Transfer Agreement or the QSA.

(ii) No landowner subscriptions required. Nothing herein shall be construed as requiring IID to solicit and secure landowner subscriptions to generate Early Transfer Water.

(e) Re-Transfer Prohibited. The Authority shall not re-transfer the Early Transfer Water for use outside the boundaries of the Authority."

New Section 3.6 is added in its entirety as follows:

"3.6 Transfer of Salton Sea Mitigation Water. IID shall transfer "Salton Sea Mitigation Water" to the Authority, at no cost or expense to the Authority, and the Authority shall deliver the Salton Sea Mitigation Water to the Salton Sea, at no cost or expense to the Authority, pursuant to the terms of this Section 3.6.

(a) Schedule. IID shall deliver Salton Sea Mitigation Water to the Authority as follows:

<i>Agreement Year</i>	<i>Calendar Year</i>	<i>Quantity (AF)</i>
<i>1</i>	<i>2003</i>	<i>5,000</i>
<i>2</i>	<i>2004</i>	<i>10,000</i>
<i>3</i>	<i>2005</i>	<i>15,000</i>
<i>4</i>	<i>2006</i>	<i>20,000</i>
<i>5</i>	<i>2007</i>	<i>25,000</i>
<i>6</i>	<i>2008</i>	<i>25,000</i>
<i>7</i>	<i>2009</i>	<i>30,000</i>
<i>8</i>	<i>2010</i>	<i>35,000</i>
<i>9</i>	<i>2011</i>	<i>40,000</i>
<i>10</i>	<i>2012</i>	<i>45,000</i>
<i>11</i>	<i>2013</i>	<i>70,000</i>
<i>12</i>	<i>2014</i>	<i>90,000</i>
<i>13</i>	<i>2015</i>	<i>110,000</i>
<i>14</i>	<i>2016</i>	<i>130,000</i>
<i>15</i>	<i>2017</i>	<i>150,000</i>

(b) Term. IID shall transfer the Salton Sea Mitigation Water to the Authority at no charge to the Authority and the Authority shall deliver the Salton Sea Mitigation Water to the Salton Sea for the lesser of (i) fifteen (15) Years or (ii) until

such time as IID transfers the Salton Sea Mitigation Water to the DWR pursuant to the IID/DWR Agreement.

(c) Purpose. IID shall transfer the Salton Sea Mitigation Water to the Authority and the Authority shall deliver the Salton Sea Mitigation Water to the Salton Sea for the sole purpose of providing mitigation water to the Salton Sea, consistent with the refined Salton Sea Habitat Conservation Strategy, as defined in the Amended and Restated Addendum to the Final Impact Report for the IID Water Conservation and Transfer Project (September 2003).

(d) Price. IID will be paid an amount that has a present value as of the Effective Date of fifty million dollars (\$50,000,000) solely from the funds collected pursuant to the QSA-JPA on the schedule attached to the QSA-JPA.

*(e) Exchange. The Authority shall deliver the Salton Sea Mitigation Water to the Salton Sea by either:
(i) causing the Salton Sea Mitigation Water to be physically delivered to the Salton Sea; or (ii) if necessary, exchanging a portion of such water with CVWD or water from other sources to be delivered to the Salton Sea or cause such water to be delivered to the Salton Sea through forbearance arrangements with IID.*

(f) IID Duty to Cooperate. IID shall reasonably cooperate with and assist the Authority in the delivery of Salton Sea Mitigation Water to the Salton Sea at no charge to the Authority.

Article 4

New Article 4.1(c) is added in its entirety as follows:

"4.1(c) Early Termination. The Authority may elect to terminate at the end of Year 35 if conditions identified in (ii) below are satisfied:

(i) Completion of Dispute Resolution – Within fifteen (15) years of the Effective Date, the Authority has reached agreement with MWD on the Actual Wheeling Rate or completed binding arbitration, litigation or other dispute-resolution mechanism with MWD to determine the Actual Wheeling Rate for Agreement Years 31 through 45.

(ii) Actual Wheeling Rate Trigger and Notice – If the Actual Wheeling Rate as determined

under (i) above exceeds one hundred twenty-five percent (125%) of the Base Wheeling Rate or the Authority has been unable to reach agreement with MWD or complete binding arbitration, litigation or other dispute-resolution mechanism, then the Authority has the right to terminate this Agreement for Transfer of Conserved Water as of the end of Agreement Year 35, but only if the Authority gives notice of such early termination no later than the end of Agreement Year 15. In any arbitration, litigation or other dispute-resolution mechanism to resolve the amount of the Actual Wheeling Rate, the Authority will cooperate, support and include IID's full participation as a real party-in-interest. Failure to give such notice before the end of Agreement Year 15 renders any right to early termination null and void and the Agreement shall continue through Agreement Year 45 regardless of the Actual Wheeling Rate. If the Authority exercises the right to terminate this Agreement as of the end of Agreement Year 35, this Agreement shall terminate at the end of Agreement Year 35 and IID shall have no further obligation to offer water to the Authority before offering water in any subsequent transfer to any other party.

Section 4.2 is deleted and replaced with the following:

"4.2 IID or the Authority may request the other to renew this Agreement on identical terms and conditions and for a Renewal Term of 30 years. Such request (the "Renewal Request") must be made no later than the end of Year 38. The Party not making the Renewal Request shall accept or reject the renewal in the exercise of its complete discretion, no later than the end of Year 40, and if no timely response is delivered, the Renewal Request is deemed rejected."

Section 4.3 is deleted and replaced in its entirety with the following.

"4.3 Right of First Refusal In the Event of Non-Renewal.

(a) If the Agreement is not renewed, then for a period of fifteen (15) years following the end of the Initial Term:

(i) *The Party making a renewal request pursuant to Section 4.2 above is granted a right of first refusal;*

(ii) *If neither Party makes a renewal request pursuant to Section 4.2 above, neither Party shall have a right of first refusal;*

(iii) *If no Renewal Term occurs, despite a mutual agreement to renew, because of the failure to satisfy the conditions to renewal, then both Parties are granted a right of first refusal. Conditions to renewal include the same conditions precedent as for the Initial Term.*

(b) *A Party with a right of first refusal must first receive from the other party a proposal to transfer Conserved Water or a proposal to acquire water on terms consistent with this Agreement before a transfer proposal is extended to any other person or entity.*

(c) *The Party receiving the proposal shall have ninety (90) days to accept the proposal or propose other terms for transfer or acquisition and reach agreement.*

(d) *If no agreement is reached, the Party making the proposal may then solicit others to contract to transfer Conserved Water or acquire water on terms identical to or less valuable to the Party than the terms of the proposal not accepted when extended to the other Party, and the terms of any counterproposal exchanged pursuant to subsection (c).*

(e) *In determining whether a proposal is less valuable, the methodology described in Section 4.4(v) shall be utilized."*

Article 5

Section 5.1(d) is modified by substituting the formula for the Base Contract Price as follows:

"5.1(d) Base Contract Price – The Base Contract Price shall be determined by the following formula:

[MWD Full Water Rate - Base Wheeling Rate] x [1 - Applicable Discount Rate] + 50% x [Base Wheeling Rate - the lesser of the Actual Wheeling Rate or 115% of the Base Wheeling Rate]

"The formula is expressed as the 'Base Contract Price equals [the MWD Full Water Rate minus the Base Wheeling Rate] multiplied by the difference between [one (1) minus the Applicable Discount Rate] plus fifty percent (50%) of the difference between [the Base Wheeling Rate minus the lesser of the Actual Wheeling Rate or one hundred fifteen percent (115% of the Base Wheeling Rate)].' Whether the Base Wheeling Rate is more than the Actual Wheeling Rate or the Actual Wheeling Rate is more than the Base Wheeling Rate will determine whether the difference is a positive or negative number and thus whether the Base Contract Price will increase or decrease."

Section 5.1(f)(x) is modified by replacing it in its entirety as follows:

"(x) Excluded Transactions: Any Transaction involving a transfer under an Adjunct Contract with MWD or CVWD, any transfer under the IID/MWD 1988 Agreement, any transfer of water conserved from the All-American Canal or the Coachella Canal, any transfer under this Agreement, or any transfer under the IID/DWR Agreement or the DWR/MWD Acquisition Agreement."

Section 5.1(w)(vii) is modified by replacing it in its entirety as follows:

"(vii) Excluded Transactions. Any transfers under this Agreement, any transfer under the IID/MWD 1988 Agreement, any transfer of water conserved from the All-American Canal or the Coachella Canal; any Transaction which became a binding contract between the parties to the Transaction before the Execution Date, or any transfer under the IID/DWR Agreement or the DWR/MWD Acquisition Agreement."

Section 5.2(a) is amended by deletion of the Shortage Premium from the formula for calculation of the price during the Initial Pricing Phase, for the period from Year 1 to Year 15 only, by adding the following provision as the last sentence:

"However, the Shortage Premium shall not be included in the formula until Agreement Year 16."

Section 5.2(a) is further modified by the addition of new Section 5.2(e) to substitute the price per AF as set forth below for Year 1 through Year 5; and to further substitute the price per AF as set forth below after Year 5 and up through Year 15, unless either IID or the Authority provides notice (the "Price Formula Notice") to the other by April 1 of any year that either has

elected to revert to the pricing formula set forth in Section 5.2(a); provided however that the Price Formula Notice cannot be given before April 1 in Year 5.

"5.2(e) Notwithstanding the provisions of § 5.2(a), the price per AF for Agreement Year 1 through Agreement Year 5, shall be as follows:

<i>Agreement Year</i>	<i>Price per AF</i>
<i>1</i>	<i>\$258</i>
<i>2</i>	<i>\$267</i>
<i>3</i>	<i>\$276</i>
<i>4</i>	<i>\$286</i>
<i>5</i>	<i>\$296</i>

Unless the IID or the Authority provides a notice by April 1 of any Year commencing with Agreement Year 5 (the "Price Formula Notice") that either has elected to revert to the pricing formula of § 5.2(a), then the price per AF for each of Agreement Years 6 through 15 that do not occur subsequent to the Price Formula Notice shall be as follows:

<i>Agreement Year</i>	<i>Price Per AF</i>
<i>6</i>	<i>\$306</i>
<i>7</i>	<i>\$316</i>
<i>8</i>	<i>\$327</i>
<i>9</i>	<i>\$338</i>
<i>10</i>	<i>\$349</i>
<i>11</i>	<i>\$363</i>
<i>12</i>	<i>\$376</i>
<i>13</i>	<i>\$390</i>
<i>14</i>	<i>\$405</i>
<i>15</i>	<i>\$420</i>

If the Price Formula Notice is given, then commencing on January 1 of the subsequent Year, the price formula of § 5.2(a), subject to the provisions of § 5.2(b) and (c), shall govern."

New Section 5.5 is added in its entirety as follows:

"5.5 Pricing for Early Transfer Water.

(a) Price. The price for the Early Transfer Water shall be one hundred and twenty-five dollars (\$125.00) per acre foot in 1999 Dollars.

(b) Wheeling. The cost of wheeling the Early Transfer Water to the Authority's Conveyance Path Terminus shall be the sole financial responsibility of the Authority and shall not affect the Price specified in § 5.5(a) above.

(c) Environmental Costs. The Authority shall be solely responsible for any and all Environmental Review Costs, Environmental Mitigation Costs and Environmental Litigation Costs, all as defined in the ECSA attributable to the Early Transfer Water, including a proportionate share of the Environmental Review Costs and Environmental Litigation Costs incurred as part of the Joint EIR/EIS process applicable to the Agreement. Environmental costs attributable to the Early Transfer water shall be paid by the Authority in addition to the Price specified in § 5.5(a) above.

New Section 5.6 is added in its entirety as follows:

"5.6 Prepayment for Water. At the end of Agreement Year 5, the Authority shall prepay IID Ten Million Dollars (\$10,000,000) for future deliveries of water. Interest on the prepayment shall begin to accrue at the end of Agreement Year 16 using the Authority's weighted average cost of funds for its short-term and long-term debt outstanding as shown in the Authority's annual financial report for each fiscal year ending June 30th. If not repaid sooner, beginning at the end of Agreement Year 16 through the end of Agreement Year 30, IID shall credit the Authority's monthly invoice in 180 equal monthly installments of \$55,555.56 plus accrued interest pursuant to Section 6.1(a) herein.

Article 6

New Section 6.7 is added in its entirety as follows:

"6.7 Payments for Early Transfer Water. The Authority shall make its payments to IID in three annual installments on June 30 of each Calendar Year for the volume identified in § 3.5 above. The annual price per acre foot in 1999 Dollars as set forth in Section 5.5(a) above shall be adjusted for inflation as set forth in § 1.1(a)(x), except that instead of the Effective Date of April 29, 1998, the date of January 1, 1999, shall be used. The payments by the Authority to IID are for the transfer of the Early Transfer

Water, whether or not the Authority actually diverts any or all of the Early Transfer Water. The provisions of § 6.2 and 6.3 of the Agreement are applicable to all payments for Early Transfer Water."

Article 7

Section 7.1(b)(i)(C) is deleted.

Section 7.1(b)(ii) is modified by substitution of the following:

"Responsibility for Mitigation Measures. The Authority shall be responsible for implementing, at its cost, all environmental mitigation measures adopted as part of the environmental review process in order to mitigate the impacts of the "project" (A) on resources within San Diego County, and (B) caused by the transportation of Conserved Water to the Authority, and the costs and expenses for impacts on the Colorado River between Lake Havasu and Imperial Dam shall be reimbursed to the Authority pursuant to the QSA-JPA."

Section 7.1(b)(iii) is deleted.

Section 7.1(c)(ii) is deleted.

Section 7.1(d)(i) through the end of (C) is modified by substitution of the following:

"SWRCB. By October 31, 2003, the SWRCB has entered a Final Order that approves the IID's transfer of Conserved Water to the Authority under this Agreement on terms consistent with the QSA and the Related Agreements and acceptable to the Parties."

Section 7.1(e) is deleted.

Section 7.3 is modified by adding the following sentence to the end of § 7.3:

"Notice by the Authority that costs exceed the applicable specified caps shall be provided to the IID within fifteen (15) days of such determination being made by the Authority, and the IID shall provide notice within forty-five (45) days of receiving such notice from the Authority that the IID will contribute the additional costs as allowed, if the IID should chose to do so."

Article 8

Section 8.1(b)(ii) is modified by substitution of the following:

"(b)(ii) Responsibility for Mitigation Measures. The IID shall be responsible for implementing, subject to all costs and expenses being reimbursed pursuant to the QSA-JPA, all environmental-mitigation measures adopted as part of the environmental review process in order to mitigate the impacts of the 'project' on (A) resources within Imperial County, exclusive of the Colorado River between Imperial Dam and the northern county border, and (B) on the Salton Sea, exclusive of impacts in Riverside County."

Section 8.1(b)(iii) is modified by substitution of the following:

"(b)(iii) After the Effective Date. If, after the Effective Date, initial mitigation costs or unanticipated environmental consequences result in additional mitigation above the IID Environmental Cost Ceiling, those costs shall not be the responsibility of IID and shall be paid pursuant to the terms of the ECSA and QSA-JPA."

Section 8.1(c)(ii) is deleted.

Section 8.1(d)(i) through the end of (G) is modified by substitution of the following:

"SWRCB. By December 31, 2002, the SWRCB has entered a Final Order that approves the IID's transfer of Conserved Water to the Authority under this Agreement and which contains the findings on terms consistent with the QSA and the Related Agreements and acceptable to the Parties."

Section 8.1(e) is deleted.

Section 8.3 is modified by adding the following sentence to the end of § 8.3:

"Notice by the IID that costs exceed the applicable specified caps shall be provided to the Authority within fifteen (15) days of such determination being made by the IID, and the Authority shall provide notice within forty-five (45) days of receiving such notice from the IID that the Authority will contribute the additional costs as allowed, if the Authority should chose to do so. This condition may also be satisfied by funding commitments made by the Authority, CVWD and the State of California pursuant to the terms of the ECSA and the QSA-JPA."

Article 9

New Section 9.3 is added in its entirety as follows:

"9.3 State Contributions and State Loan Guarantee Condition Precedent. By October 31, 2003, the State Contributions and State Loan Guarantee, as defined in the ECSA, must have been committed for the benefit of the IID and others as set forth in the ECSA."

New Section 9.4 is added in its entirety as follows:

"9.4 Contracting Landowner Condition Precedent. By October 31, 2003, the IID shall enter into contracts with the Landowners conditioned on the QSA, Related Agreements and the Secretarial Implementation Agreement, all being in the form approved by the IID, the effectiveness of the Fourth Amendment, and Section 9.3 having been satisfied, and that call for, and are expected to yield when the Water Conservation efforts have been fully implemented, at least one hundred thirty thousand (130,000) AFY of Conserved Water. IID shall commence a solicitation process for Landowner contracts as soon as reasonably practical following successful negotiation and documentation of the QSA, Related Agreements and the Secretarial Implementation Agreement, and which solicitation process shall attempt in good faith to be successfully concluded within five (5) months of commencement."

Articles 10 to 13

No change.

Article 14

Section 14.2 is amended by the temporary deletion of the last sentence of Section 14.2 until January 1, of Agreement Year 16 as follows:

"Notwithstanding the foregoing, following will be a permitted Water Conservation effort under IID contracts with its Contracting Landowners through Agreement Year 15. When IID is relieved of its obligation to transfer Conserved Water to the Authority by means of following, IID and the Authority shall promptly meet and negotiate in good faith a reasonable schedule for IID to shift the creation of Conserved Water from following to efficiency-based conservation. IID is "relieved of its obligation" when, without cost or expense to the IID, an environmental assessment of the impacts of the conversion from following to efficiency under CEQA and NEPA is completed, along with all

necessary governmental permits and approvals (including, to the extent required, the approval of CDFG, USFWS and SWRCB), and no additional environmental mitigation attributable to the impacts of the conversion is required, or if additional environmental mitigation is required, the costs of such additional environmental mitigation shall be the sole responsibility of the Authority for any amounts that such environmental mitigation costs are in excess of the Environmental Mitigation Cost Limitation, as defined in the QSA-JPA."

New Section 14.3 is added in its entirety as follows:

"14.3 Protection of IID Water Supply. During the Term of this Agreement, the Authority shall not, in any way pursue any legislative, administrative or judicial proceeding, or take any other action that could or would reduce IID's Senior Water Rights or IID's right to divert and use Colorado River water thereunder.

New Section 14.4 is added in its entirety as follows:

"14.4 Fallowing Protection for IID. During the term of this Agreement and for six (6) years thereafter, the Authority covenants that in any legislative, administrative, or judicial proceeding involving an evaluation or assessment of IID's use of water, the Authority shall conclusively presume that any water conserved through fallowing for either (a) transfer to the Authority or (b) used by IID to lessen environmental impacts caused by or related to the transfer of Conserved Water to the Authority, has been conserved by IID in the same volume as if conserved by efficiency improvements, such as by reducing canal seepage and spills or by reducing surface or subsurface runoff from irrigated fields. The Authority further covenants that it hereby supports IID in seeking to cause any legislative, administrative or judicial body evaluating or assessing IID's use of water during the Term of this Agreement and for six (6) years thereafter to make the same conclusive presumption. In addition, the Authority also covenants that during the Term of this Agreement and for six (6) years thereafter, the Authority shall not in any way seek or support, including any activity before any legislative, administrative or judicial body, (a) the creation of Conserved Water for transfer by IID after December 31, 2017 through the use of temporary or permanent fallowing or crop rotation or (b) the use by IID of its Senior Water Rights or IID created Conserved Water to lessen the environmental impacts on the Salton Sea or related to a decline in the elevation of the Salton Sea resulting from the transfer of Conserved Water by the IID to the Authority. The Authority acknowledges and hereby supports the right of the IID to create all

Conserved Water after Agreement Year 15 by efficiency improvements as reflected on the Compromise IID/SDCWA and QSA Delivery Schedule attached hereto as Exhibit 1 without creating or providing any water to lessen environmental impacts on the Salton Sea or related to a decline in the elevation of the Salton Sea. "

New Section 14.5 is added in its entirety as follows:

"14.5 Mitigation of Socio-Economic Impacts Caused by Land Fallowing. IID shall exercise best efforts to minimize socioeconomic impacts from the land fallowing necessary to transfer Conserved Water to the Authority and to lessen environmental impacts related to the transfer of Conserved Water to the Authority. In designing and implementing the fallowing program, IID shall further seek to facilitate the voluntary, broad-based participation by farmers to meet the IID's long-term water delivery requirements to the Authority. The Authority and IID agree that this Section 14.5 shall apply only to socioeconomic impacts attributable to the land fallowing conducted for transfer of Conserved Water to the Authority pursuant to this Agreement, and to lessen environmental impacts related to such transfers.

(a) Resolution of Disagreement Among the Parties Concerning the Socioeconomic Impacts Caused by Land Fallowing. IID and the Authority have a fundamental disagreement concerning the likely socioeconomic impacts caused by land fallowing to transfer Conserved Water to the Authority or to lessen environmental impacts related to the transfer of Conserved Water to the Authority. In order to avoid this disagreement from preventing the use of land fallowing, IID and the Authority have agreed that IID shall cause to be established no later than October 12, 2003, a Local Entity that will administer the receipt and disbursement of socioeconomic impact payments made by the Authority and IID.

(i) Establishment of Local Entity. IID shall cause the Local Entity to be established after consultation with the County of Imperial and other Imperial Valley local interests. The Local Entity's governance powers, reporting obligations and other relevant matters shall require the Local Entity to use the financial resources made available by the Authority and IID to

mitigate the socioeconomic impact of land following with transparency and at reasonable administrative costs.

(ii) *Entity Operations.* *The Local Entity shall be operated with maximum efficiency to avoid incurring significant administrative costs. It shall not own real property or employ a full time staff. Staff (other than ministerial staff) will be provided as needed for free by the IID and the County of Imperial.*

(b) *Funding of Local Entity.* *The Authority and IID shall make the following socioeconomic impact payments to the Local Entity to mitigate both the socioeconomic impacts of land following used to create Conserved Water to transfer to the Authority and to lessen environmental impacts related to the transfer of Conserved Water to the Authority, as identified pursuant to § 14.5(d) below and to cover reasonable administrative costs of the Local Entity.*

(i) *Local Entity's Funding Requirements.* *The Local Entity shall receive socioeconomic impact payments from the Authority and the IID sufficient to pay the estimated and measured annual and cumulative socioeconomic impacts of land following and reasonable costs of administration. The cost of administration shall include the cost of the studies and measurements undertaken by the Economists Panel as specified below in § 14.5(c).*

(ii) *Authority's Initial Socioeconomic Impact Payment.* *The Authority shall pay the Local Entity an Initial Socioeconomic Impact Payment equal to the sum of ten million dollars (\$10,000,000) in nominal Dollars to the Local Entity in four installment payments. The first installment payment shall be paid to the Local Entity on or before thirty (30) days from the Effective Date in the amount of one hundred thousand (\$100,000) in nominal Dollars. The first installment is anticipated to cover the initial administrative expenses. The second*

installment payment shall be paid by the Local Entity by December 31, 2004, in the amount of two million dollars (\$2,000,000) in nominal Dollars, plus interest from the Effective Date at an annual rate based on the one-year Treasury Note Rate on the Effective Date. The third installment payment shall be paid to the Local Entity by December 31, 2005, in the amount of three million dollars (\$3,000,000) in nominal Dollars, plus interest from the Effective Date at an annual rate based on the two-year Treasury Note Rate on the Effective Date. The fourth installment payment shall be paid to the Local Entity by December 31, 2006, in the amount of four million dollars and nine hundred thousand dollars (\$4,900,000) in nominal Dollars, plus interest from the Effective Date at an annual rate based on the three-year Treasury Note Rate on the Effective Date. Notwithstanding the above schedule of installment payments, the Authority shall accelerate any of the payments of the Initial Socioeconomic Impact Payment amount as necessary to assure that the funds available to the Local Entity are sufficient for the disbursements reasonably necessary to address the estimated and measured annual and cumulative socioeconomic impacts and reasonable administrative costs.

- (iii) *IID Funding of the Local Entity.* *Starting in Agreement Year 8, IID shall pay the Local Entity by July 31 of each Year socioeconomic impact payments equal to five percent (5%) of the annual contract payments made by the Authority to the IID until IID's cumulative socioeconomic impact payments to the Local Entity equal ten million dollars (\$10,000,000) in nominal Dollars.*
- (iv) *Authority's Subsequent Socioeconomic Impact Payments.* *The Authority shall pay all further socioeconomic impact payments due to the Local Entity in excess of the*

Authority's Initial Socioeconomic Impact Payment and the monies available from IID's Funding of the Local Entity specified in § 14.5(b)(iii). The Authority shall make Subsequent Socioeconomic Impact Payments by June 30 of each Year to assure that the funds available to the Local Entity are sufficient for the disbursements reasonably necessary to address the estimated and measured annual and cumulative socioeconomic impacts and reasonable administrative costs.

- (v) *IID's Reimbursement of the Authority's Initial Socioeconomic Impact Payment.* *Starting in Agreement Year 16 and continuing through Agreement Year 45, IID shall credit against the payment otherwise due from the Authority in an amount equal to ten millions dollars (\$10,000,000) in nominal Dollars divided by the cumulative amount of water scheduled for delivery to the Authority between Agreement Year 16 and Agreement Year 45 as of Agreement Year 16. If the 1998 Agreement between IID and the Authority terminates before Agreement Year 45, the Authority has no right to receive any further reimbursement upon or after the termination for any unreimbursed portion of the Authority's Initial Socioeconomic Impact Payment.*

- (vi) *Refund of Any Excess Authority Socioeconomic Impact Payments.* *After Agreement Year 15, or within 24 months after following pursuant to this Section 14.5 has ceased, whichever is earlier, the Local Entity shall determine the amount, if any, the Authority's Cumulative Socioeconomic Impact Payments exceeds the difference between the Local Entity's cumulative funding requirements and IID's cumulative funding of the Local Entity. The Local Entity shall reimburse the Authority for the amount of any excess by the end of Agreement Year 16, or within 36 months*

after following pursuant to this Section 14.5 has ceased, whichever is earlier..

(vii) *Annual Reporting to the Authority.* *Within ninety (90) days after the end of an Agreement Year, the Local Entity shall prepare and publish an annual report of the Local Entity's receipts and disbursements and prepare a budget for the administrative costs of the Local Entity for the following Agreement Year.*

(c) *Estimation and Measurement of the Socioeconomic Impacts of Land Following.* *The annual and cumulative socioeconomic impacts shall be estimated and measured by a Socioeconomic Methodology based on a Regional Economic Model, a longitudinal study and consideration of economic data of the IID and Imperial County in accordance with the following procedure:*

(i) *Economists Panel.* *As soon as reasonable after the Effective Date, a three-person panel of professional economists shall be formed with the responsibility to establish a Socioeconomic Methodology to estimate and measure the annual and cumulative socioeconomic impacts of land following based on procedures to be developed for combining evidence from the different approaches specified in § 14.5(c)(iii-vi) below.*

(ii) *Appointment of Panel Members.* *One professional economist representative shall be appointed by the Local Entity, one by the Authority, and the third by the mutual consent of the Local Entity's and the Authority's representatives. The Local Entity's and the Authority's representatives shall serve at the pleasure of the appointing entity. The third representative shall serve a term of one-year. The third representative may be re-appointed by the mutual consent of the Local Entity's representative and the Authority's representative.*

- (iii) Responsibility of Economist Panel. *The panel shall be responsible for developing and implementing a Socioeconomic Methodology based on a Regional Economic Model and corroborating studies as described below.*
- (iv) Development of Regional Economic Model. *The panel shall develop the Regional Economic Model, including the key parameters, the necessary inputs to the model and the method of determining proper measurements based upon credible available information. The panel shall also develop the method of measuring and estimating socioeconomic impacts and the method of corroborating estimated socioeconomic impacts with credible evidence from countywide economic data and longitudinal studies, in a manner consistent with the Guidelines for Estimation and Measurement and in accordance with the Timeline for the Implementation of Defined Tasks as set forth in Exhibit 2 attached hereto.*
- (v) Periodic Adjustments to Regional Economic Model. *The panel shall make periodic adjustments to the Regional Economic Model based upon credible available information and methods developed by the panel in accordance with the Guidelines for Estimation and Measurement. Periodic adjustments may be made, including but not limited to changes in the amount of acreage fallowed, cropping patterns, crop prices, crop yields, spending patterns, and other economic factors.*
- (vi) Corroborating Studies. *The panel shall direct the corroborating studies. Before IID initiates land fallowing to make Conserved Water available for transfer to the Authority, the panel shall initiate a longitudinal analysis of socioeconomic impacts. Within two years from the date fallowing is initiated by IID, the panel will*

assess whether the longitudinal study provides credible evidence that adjustments should be made to the socioeconomic impacts estimated by the Regional Economic Model. If adjustments are warranted, the panel shall adjust the socioeconomic impacts in accordance with methods consistent with the Guidelines for Estimation and Measurement.

- (vii) Panel Meetings. The panel shall meet as frequently as necessary to carry out its responsibilities. A meeting shall be convened at the request of any representative.*
- (viii) Deadline for Initial Findings. The panel shall present its initial assessment of the estimated annual and cumulative socioeconomic impacts of land fallowing to the Local Entity and the Authority no later than June 1, 2004.*
- (ix) Annual Reporting. The panel shall report annually by June 1 of each Year to the Local Entity and the Authority on updated estimated and measured annual and cumulative socioeconomic impacts of land fallowing.*

(d) Disbursements. The Local Entity shall use the Socioeconomic Impact Payments paid by the Authority and the IID to pay the costs of mitigating the estimated and measured annual and cumulative socioeconomic impacts of land fallowing and reasonable administrative costs of the Local Entity. Except for the expenditure of the one hundred thousand dollars (\$100,000) made available through the first installment payment of the Authority's Initial Socioeconomic Impact Payment and the funds necessary for reasonable administrative expenses, the Local Entity shall make future disbursements in accordance with an approved budget and economic mitigation plan. The economic mitigation plan shall be developed in consultation with the State of California Resources Agency, Department of Food and Agriculture, Department of Commerce, and Department of Finance.

- (e) Dispute Resolution. *If a dispute arises concerning the funding, disbursement or measurements of the socioeconomic impacts of land fallowing, the Local Entity and the Authority shall settle the matter by binding arbitration utilizing a process parallel to that set out in § 17.4, 17.5 and 17.7, except as set forth below:*
- (i) Meet and Confer Obligation. *Before submitting a dispute to arbitration, the Local Entity and the Authority shall meet and confer in an attempt to resolve the dispute. No Administrative Committee shall be created or involved.*
 - (ii) Appointments to Arbitration Panel. *The Local Entity shall be entitled to appoint one arbitrator. The Authority shall be entitled to appoint one arbitrator. The two arbitrators appointed by the entities shall appoint a third arbitrator by mutual agreement.*
 - (iii) Decision of Arbitration Panel. *The arbitration panel shall use to the maximum extent practicable the principles and methods contained in the Measurement Guidelines to rule on the dispute submitted for arbitration. The decision issued by the arbitration panel shall be final.*
- (f) Coordination with SB 277 (2003 Stats. ch. 611). *The Local Entity and the Authority shall coordinate the efforts of the panel regarding the initial assessment of the estimated annual and cumulative socioeconomic impacts from land fallowing with the process required by section 9 of Chapter 617 of the 2002 Statutes as amended. The panel shall coordinate its efforts with the State of California Resource Agency, Department of Food and Agriculture, Department of Commerce, and Department of Finance in order to avoid duplication of effort and inconsistent results. To the extent practicable, the panel shall obtain relevant data from these departments and agency.*
- (g) Socioeconomic Litigation. *To the extent litigation is commenced against the IID, the Authority, the Local Entity or the panel, the Authority and Local Entity shall*

cooperate and coordinate the defense of such litigation, and all costs of defense and any judgment resulting shall be treated as, and paid for, the same as a reasonable administrative cost of the Local Entity.

New Section 14.6 is added in its entirety as follows:

"14.6 Settlement and Efficiency Conservation Opportunity Payment. In consideration of (i) the settlements reached with CVWD and MWD through the QSA, and (ii) the opportunity to increase the conservation ramp-up schedule and utilize conservation methods of IID's choice, including efficiency conservation, as set forth in the IID/DWR Agreement, IID shall pay to the QSA-JPA twenty-four million dollars (\$24,000,000) in Effective-Date Dollars, on the schedule attached as an exhibit to the QSA-JPA."

Article 15

Section 15.2(a) is amended to read in its entirety as follows:

"(a) Transfer. The IID fails to transfer Conserved Water or Early Transfer Water in the quantities and on the schedule specified in this Agreement or this Amendment."

Article 18

Section 18.1 is amended to add the following sentence:

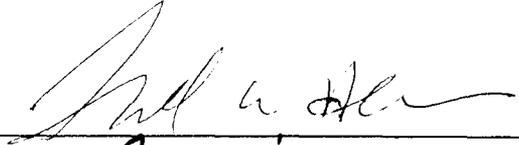
"Notwithstanding anything to the contrary, the Local Entity referenced in § 14.5 shall be a third-party beneficiary of the Agreement for purposes of the provisions of § 14.5, and if the Local Entity is unable to exercise any rights as a third-party beneficiary, the County of Imperial is authorized to act in its stead."

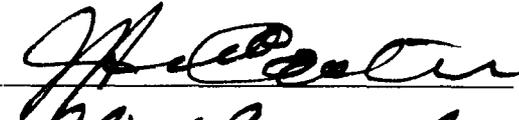
Exhibits

Exhibit K to the 1998 IID/SDCWA Transfer Agreement is hereby replaced with the Colorado River Water Delivery Agreement as identified in the QSA.

IN WITNESS WHEREOF, IID and Authority have executed this Fourth Amendment as of the day and year first written above.

IMPERIAL IRRIGATION DISTRICT

By 
Its PRESIDENT

By 
Its Chief Counsel

SAN DIEGO COUNTY WATER
AUTHORITY

By 
Its General Manager

**EXHIBIT 1
COMPROMISE IID/SDCWA AND QSA DELIVERY SCHEDULE**

Agmt Yr	Cal Yr	IID/SD		IID/CVWD		IID/MWD		Total Delivery		Total Efficiency		Following for Delivery		Mitigation Following		Total Following	
		(KAF)	(KAF)	(KAF) ¹	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)	(KAF)
1	2003	10	0	0	0	0	10	0	0	0	10	0	5	15			
2	2004	20	0	0	0	0	20	0	0	0	20	0	10	30			
3	2005	30	0	0	0	0	30	0	0	0	30	0	15	45			
4	2006	40	0	0	0	0	40	0	0	0	40	0	20	60			
5	2007	50	0	0	0	0	50	0	0	0	50	0	25	75			
6	2008	50	4	4	0	0	54	4	4	4	50	4	25	75			
7	2009	60	8	8	0	0	68	8	8	8	60	8	30	90			
8	2010	70	12	12	0	0	82	12	12	12	70	12	35	105			
9	2011	80	16	16	0	0	96	16	16	16	80	16	40	120			
10	2012	90	21	21	0	0	111	21	21	21	90	21	45	135			
11	2013	100	26	26	0	0	126	26	26	26	100	26	50	150			
12	2014	100	31	31	0	0	131	31	31	31	100	31	50	150			
13	2015	100	36	36	0	0	136	36	36	36	100	36	50	150			
14	2016	100	41	41	0	0	141	41	41	41	100	41	50	150			
15	2017	100	45	45	0	0	145	45	45	45	100	45	50	150			
16	2018	130	63	63	0	0	193	63	63	63	130	63	0	0			
17	2019	160	68	68	0	0	228	68	68	68	160	68	0	0			
18	2020	192.5	73	73	2.5	2.5	268	73	73	73	192.5	73	0	0			
19	2021	205	78	78	5.0	5.0	288	78	78	78	205	78	0	0			
20	2022	202.5	83	83	2.5	2.5	288	83	83	83	202.5	83	0	0			
21	2023	200	88	88	0	0	288	88	88	88	200	88	0	0			
22	2024	200	93	93	0	0	293	93	93	93	200	93	0	0			
23	2025	200	98	98	0	0	298	98	98	98	200	98	0	0			
24	2026	200	103	103	0	0	303	103	103	103	200	103	0	0			
25	2027	200	103	103	0	0	303	103	103	103	200	103	0	0			
26	2028	200	103	103	0	0	303	103	103	103	200	103	0	0			
27-45	2029-2047	200	103	103	0	0	303	103	103	103	200	103	0	0			
46-75	2048-2077	200	50	50	0	0	250	50	50	50	200	50	0	0			

¹ or MWD if CVWD declines to acquire.

Exhibit 2

Guidelines for Estimation and Measurement of Socioeconomic Impacts and Timeline For Implementation of Defined Tasks

IID and the Authority have a fundamental disagreement concerning the likely socioeconomic impacts caused by land fallowing to transfer Conserved Water to the Authority or to lessen environmental impacts related to the transfer of Conserved Water to the Authority. The major source of this disagreement relates to different expectations regarding the crops likely to be fallowed. Other sources of potential disagreement involve the proper estimation and measurement of the economic impact of the crops actually fallowed on the economy of Imperial Valley.

The purpose of this Exhibit 2 is to provide guidelines for the estimation and measurement of socioeconomic impacts from land fallowing and to establish the timeline for implementation of defined tasks assigned to the Economists Panel ("Panel") established pursuant to Section 14.5(c). The Panel shall conduct its studies in accordance with the guidelines and timelines presented below.

Estimation and Measurement of Socioeconomic Impacts

The Panel shall develop and implement a Socioeconomic Methodology to estimate and measure the annual and cumulative socioeconomic impacts of land fallowing through the development and use of a Regional Economic Model, as corroborated by evidence from available data on countywide economic conditions and supplemental economic studies of the income and employment of third parties, and evaluated for reliability by standard sensitivity analysis techniques.

1. *Regional Economic Model.* Regional Economic Model shall be based on any necessary adjustments of the standard IMPLAN Model for the specific economic circumstances of Imperial County and shall include the following considerations in the construction of the Social Accounting Matrix (SAM):
 - (a) The Panel shall identify the major industries in Imperial County and eliminate any sectors not relevant to the Imperial County economy from the national version of IMPLAN.
 - (b) The Panel shall review and adjust, where necessary, the pattern of industry purchases of capital, labor and intermediate goods to reflect any differences between the structure of the economy of Imperial Valley and the structure of the SAM of the national version of IMPLAN. In considering adjustments to the coefficients of the agricultural sector, the Panel shall consider relevant data available from California and Arizona cooperative extension reports, direct survey evidence, and other credible sources.

- (c) The Panel shall consider adjustments to the national expenditure coefficients from the national version of IMPLAN based on credible information pertaining to the expenditure patterns of recipients of capital and labor income in Imperial County.
 - (d) The Panel shall consider adjustments to the local and state government coefficients in the national version of IMPLAN based on credible information available from Imperial County governmental agencies and the California Franchise Tax Board.
 - (e) The Panel shall balance any adjustments made to the SAM by a commonly accepted method.
2. *Estimation of Socioeconomic Impacts.* The Panel shall use the Regional Economic Model to estimate the annual and cumulative third party socioeconomic impacts of land fallowing for the specific circumstances of Imperial County including the following considerations:
- (a) Third-party impacts are defined as (i) changes in the after-tax income of individuals or entities residing in Imperial County not participating in the IID land fallowing program; and (ii) changes in the tax receipts of local governments within Imperial County.
 - (b) The Panel's determination of the crop acreage fallowed under the IID fallowing program shall be based on a negotiated method of utilizing information from cropping history of land fallowed, cropping patterns after land re-enters production, and other relevant information related to the economic conditions of crop markets and other relevant factors influencing cropping patterns.
 - (c) The Panel's determination of crop yields for land fallowed shall be based on a negotiated method using average crop yields in Imperial Valley as adjusted by credible evidence indicating that the crop yields of fallowed lands are expected to differ from average countywide crop yields.
 - (d) The Panel's determination of crop revenues from fallowed land shall be based on the average price for the crop fallowed (unless credible evidence can be generated regarding crop prices on fallowed lands) and the adjusted crop yield of fallowed land determined pursuant to 2(c).
 - (e) Determination of socioeconomic impact of land fallowing shall also consider the economic stimulus within Imperial County from contract payments received for land fallowing. The Panel's determination shall consider the implications of the mix of resident/nonresident landowners participating in the land fallowing program and the landowner/tenant split of IID land fallowing payments. The estimate of the economic stimulus shall also consider pro forma income tax liabilities of recipients of IID land fallowing payments. The Panel shall develop a

method for annualizing any up front payments receipts by participants in an IID land fallowing program. The Panel shall also consider how the recipient of any up front payments may affect savings and current consumption and the pattern of expenditures. If there is credible evidence that recipients of IID land fallowing payments would invest in farming capital, then the Panel shall consider the impact of such investment on the economy of Imperial Valley.

- (f) Estimates of the impacts of land fallowing shall also include the stimulus effect of other components of IID land fallowing program, including dust/weed mitigation, IID program administration and environmental mitigation. Impact measurement shall also consider the stimulus effect of government grants for public works and business investment programs to facilitate economic development, but only if made available primarily to offset the socioeconomic impacts of land fallowing.
- (g) Estimates of the impact of IID land fallowing on local tax revenues shall consider the impact of the IID land fallowing program on local tax bases.
- (h) Determination of socioeconomic impact of land fallowing shall also consider credible evidence concerning the impact of the land fallowing program on land productivity.
- (i) Calculation of socioeconomic impacts shall also include a sensitivity analysis of model outputs using a method to be negotiated. Sensitivity analysis is intended to assess the credibility of model outputs resulting from uncertainties about the value of key parameters in the regional economic model. Analysis may also consider qualitative factors such as specification of production functions, role of technological change and other capital investments, and other factors.

3. *Comparison of Estimated Impacts with County Economic Statistics.* Estimates of the socioeconomic impacts of land fallowing shall be corroborated with a negotiated method of examining evidence from countywide economic data on income, employment, and other relevant economic data. The negotiated method shall consider the statistical validity of testing the estimated magnitude of the socioeconomic impacts of land fallowing with countywide data. If the examination of county economic statistics provides statistically reliable information that the estimates from the Regional Economic Model are materially inaccurate, then the Panel shall make any necessary adjustments to the Regional Economic Model.

4. *Longitudinal Analysis.* The longitudinal study undertaken pursuant to Section 14.5(c)(vi) shall consider individuals providing labor and material

inputs to farmers in the Imperial Valley. The study shall examine the incidence and duration of unemployment resulting from fallowing, any adjustments made by businesses providing agricultural services, and other factors. Any credible evidence from longitudinal studies shall be considered in determining whether there should be an adjustment in the funding requirements of the Local Entity.

Timeline for Implementation of Defined Tasks

The Panel shall conduct their studies within the timelines presented below.

1. *Development of Regional Economic Model.* The Panel shall complete the development of the Regional Economic Model based on any adjustments made pursuant to 1(a)-(e) above within 45 Calendar Days of the commencement of work.
2. *Development of Necessary Methods to Estimate Socioeconomic Impacts.* Within 60 Calendar Days of the commencement of work, the Panel shall submit to the Local Entity and the Authority a written report summarizing the design and identification of necessary information for the methods required above for the estimation of socioeconomic impacts of land fallowing, including:
 - a. the method and information to be used in determining crop acreage fallowed in accordance with Section 2(b)(above);
 - b. the method and information to be used to adjust crop yields for specific lands fallowed relative to the countywide average of crop yields in accordance with 2(c) above;
 - c. any evidence to be relied up to estimate that crop prices for fallowed lands differ from countywide average crop prices in accordance with 2(d) above,
 - d. the methods and information to be used to estimate the economic stimulus within Imperial County from contract payments made for land fallowing in accordance with 2(e) above;
 - e. the methods and information to be used to estimate the economic stimulus from other components of IID fallowing in accordance with 2(f) above;
 - f. the methods and information to be used to estimate the impact of IID land fallowing on local tax revenues in accordance with 2(g) above;
 - g. the methods and information to be used to consider the impact of land fallowing on land productivity in accordance with 2(h) above;
 - h. the specification of the procedures to be relied upon to conduct the sensitivity analyses in accordance with 2(i) above; and
 - i. identification of the specific economic statistics and methods to be used to corroborate the estimated socioeconomic impacts of land fallowing in accordance with 3 above.

3. *Initiation of Longitudinal Study.* Within 75 Calendar Days of the commencement of work, the Panel shall submit to the Local Entity and the Authority a written report describing the study design, anticipated budget, and timing of the longitudinal study to be undertaken pursuant to Section 14.5(c)(vi). The Local Entity and the Authority must approve the proposed study before the Panel can proceed with its study plans.
4. *Initial Estimates of the Annual and Cumulative Socioeconomic Impact of Land Fallowing.* Within 120 Calendar Days of the commencement of work, the Panel shall provide the Local Entity with a draft report of the estimated Annual and Cumulative Impact of Land Fallowing through Agreement Year 15. The report shall discuss how information expected to become available in subsequent years may require adjustments to the Panel's initial estimates.
5. *Annual Reporting.* The Panel shall submit an annual report on updated estimated and measured socioeconomic impacts of land fallowing as provided in Section 14.5(c)(ix). The annual report shall include a written work plan and proposed budget for the Panel's activities in the following fiscal year.

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



October 10, 2003

Mr. Steve Robbins
General Manager - Chief Engineer
Coachella Valley Water District
Post Office Box 1058
Coachella, California 92236-1058

Mr. Ron Gastelum
President and CEO
Metropolitan Water District of Southern California
700 North Alameda Street
Los Angeles, California 90012

I am in receipt of your proposed "Transfer and Exchange Agreement for 35,000 acre-feet" that will be entered into between your two agencies. This Agreement will be one of the agreements related to the implementation of the Quantification Settlement Agreement executed among Imperial Irrigation District, Coachella Valley Water District and Metropolitan Water District of Southern California. Because the QSA sets aside longstanding disputes regarding the transfer and use of Colorado River water in California, the Department of Water Resources supports the 35,000 af Transfer Agreement.

The Agreement will provide for the delivery of a portion of MWD's Colorado River supply to CVWD to facilitate a transfer of MWD's State Water Project water. Under the terms of this Agreement, the Department will continue to deliver the SWP water under the long-term water supply contract between DWR and MWD to an existing point of delivery in MWD's service area at MWD's request. MWD will continue to meet all its obligations, including financial, for the 35,000 af, as required under the long-term water supply contract. The point of delivery and the amount and rate of delivery permitted under MWD's contract would not be changed by this proposal. Accordingly, the proposal comports with existing contractual terms and does not require the Department to take any action.

Congratulations on your accomplishment. If you have any questions or need further information, please call me at (916) 653-7007 or Dan Flory, Chief of DWR's State Water Project Analysis Office, at (916) 653-4313.

Sincerely,


for Michael J. Spear
Interim Director

cc: Mr. John Coburn
General Manager
State Water Contractors
455 Capitol Mall, Suite 220
Sacramento, California 95814

DELIVERY AND EXCHANGE AGREEMENT
BETWEEN METROPOLITAN AND COACHELLA
FOR 35,000 ACRE-FEET

This Delivery and Exchange Agreement (“Agreement”) is entered into this tenth day of October, 2003, by and between the Coachella Valley Water District, a public agency (“CVWD”), and The Metropolitan Water District of Southern California, a public agency (“Metropolitan”). CVWD and Metropolitan are sometimes referred to individually as a “Party” or collectively as the “Parties.”

RECITALS

- A. On July 7, 1983 the Parties, along with the Desert Water Agency (“Desert”) entered into separate agreements for delivery by Metropolitan of Colorado River water to Desert and CVWD in exchange for an equal amount of Desert’s and CVWD’s water from the State Water Project (the “1983 Exchange Agreements”);
- B. Subject to an early cancellation provision, the 1983 Exchange Agreements extended the exchange of Metropolitan’s Colorado River water for Desert’s and CVWD’s State Water Project water that had been in effect under agreements executed in 1967 until the end of the term of CVWD’s and Desert’s State Water Contracts, but in no event beyond the year 2035;
- C. On June 28, 1984 the Parties, including Desert, entered into an agreement which allowed Metropolitan to deliver exchange water to Desert and CVWD in advance of Metropolitan receiving their State Water Project water (“1984 Advance Delivery Agreement”);
- D. This Agreement is independent of the 1983 Exchange Agreements and 1984 Advance Delivery Agreement;
- E. The Quantification Settlement Agreement entered into on or about October 10, 2003 (“Quantification Settlement Agreement”), among Imperial Irrigation District (“Imperial”), CVWD and Metropolitan provides that Metropolitan is to transfer to CVWD for a specified time period the right to utilize thirty-five thousand acre-feet (35,000 AF) of water available from Metropolitan’s State Water Project entitlement (“Annual Table A Amount”) pursuant to Metropolitan’s State Water Project contract dated November 4, 1960, as amended from time to time, in return for which the transfer water will be exchanged for Colorado River water (“Delivery and Exchange”);
- F. This Delivery and Exchange is separate and apart from a potential transfer for a specified time period of Table A water resulting from a transfer of one-hundred thousand acre feet (“100,000 AF”) of Metropolitan’s State Water Project Table A Amount amongst Metropolitan, CVWD and Desert. The Parties hereto and Desert shall meet in good faith from time to time, to conclude negotiations regarding the potential utilization and

exchange of the aforesaid 100,000 AF. The foregoing potential transfer shall not be contingent upon a proposed Metropolitan-CVWD conjunctive use program; and

- G. Except as specifically provided herein, the Parties do not intend to, and under the Agreement do not in any way, transfer, assign, encumber, or grant to each other any ownership interest in or control over each other's water rights, nor do they intend in any way to define, modify or agree on the proper use, purposes or limits of each other's water rights.

ARTICLE 1

DEFINITIONS

1.1 **Incorporated Definitions.** For purposes of this Agreement, the terms with initial capital letters shall have the meanings set forth in the Quantification Settlement Agreement or in the Acquisition Agreement Between CVWD and Metropolitan, dated on or about October 10, 2003, and Metropolitan's and Coachella's State Water Contracts, unless the context otherwise requires.

1.2 **Coachella's State Water Contract.** Contract between Coachella and State Department of Water Resources for a water supply dated March 29, 1963, as amended from time to time prior to this Agreement.

1.3 **Costs of Supply Payment** shall have the meaning set forth in Section 2.7 (Costs of Supply).

1.4 **Due Date.** Payment of amounts shall be due and owing on the tenth (10th) business day of the month following the receipt of such invoice.

1.5 **DWR.** California Department of Water Resources.

1.6 **Effective Date** shall have the meaning set forth in Section 3.1 (Term).

1.7 **Entitlement Water** has the meaning set forth in Section 2.1 (Delivery).

1.8 **Exchange Water** shall have the meaning set forth in Section 2.5 (Exchange Water).

1.9 **Metropolitan's State Water Contract.** That contract between Metropolitan and the State Department of Water Resources for a water supply dated November 1, 1960, as amended from time to time prior to and subsequent to this Agreement.

1.10 **Metropolitan's State Water Project Water.** Water which Metropolitan has a right to receive pursuant to Metropolitan's State Water Contract.

1.11 **Points of Delivery** shall have the meaning set forth in Section 2.6 (Points of Delivery).

1.12 **State Water Project**. Part of the State Water Resources Development System, authorized and constructed pursuant to Section 12930, *et seq.*, of the Water Code, to deliver water to various public agencies throughout the State, including Metropolitan and CVWD.

1.13 **Supplemental Energy**. Discretionary energy purchases made by Metropolitan in excess of the energy obtained by Metropolitan from Hoover and Parker Dam Power Plants, Southern California Edison contractual benefit energy or Southern California Edison and/or DWR Exchange Energy to pump water on the Colorado River Aqueduct.

1.14 **Whitewater Service Connections**. Those water delivery service connections located along the Colorado River Aqueduct at Station 09704+56 and Station 09380+55, or at other locations as mutually agreed upon by the parties.

1.15 **Annual Table A Amount and Entitlement** are interchangeable terms.

ARTICLE 2

DELIVERY AND EXCHANGE

2.1 **Delivery**. Pursuant to and subject to Metropolitan's State Water Contract and this Agreement, Metropolitan shall deliver to CVWD as of January 1 of the first year following the Effective Date and ending on the Termination Date, thirty-five thousand acre-feet (35,000 AF) of water available from Metropolitan's State Water Project Annual Table A Amount ("Entitlement Water").

2.2 **Consent of DWR**. CVWD and Metropolitan shall jointly seek the approval of DWR for the delivery of Metropolitan Entitlement Water under the terms and conditions of this Agreement. CVWD and Metropolitan shall also jointly seek any other approvals needed for the delivery of this Entitlement Water. Each party shall bear its own costs in procuring any such necessary approvals.

2.3 **Consultation**. Metropolitan and CVWD staff shall meet and consult by September 1st of each calendar year to discuss scheduling of water deliveries, and other operational issues as needed.

2.4 **Transfer Water Order**. On or by October 1st of each calendar year, Metropolitan shall include in its order to DWR 35,000 AF of Entitlement Water, unless eliminated or reduced pursuant to Section 2.10 (Requests to Eliminate or Reduce Water Delivered).

2.5 **Exchange Water**. All deliveries of Entitlement Water, of whatever amount is made available by DWR as a result of the order made pursuant to Section 2.4 (Transfer Water

Order), shall be exchanged with Metropolitan for 35,000 AF of Metropolitan's Colorado River water ("Exchange Water").

2.6 **Points of Delivery.** For purposes of this Agreement, the Entitlement Water shall be considered as delivered to CVWD by Metropolitan as Exchange Water at Imperial Dam, the Whitewater Service Connections, or through the Advance Delivery Agreement ("Points of Delivery"). CVWD shall be responsible for arranging delivery of the Exchange Water to CVWD's Service Area from these points of delivery. Except when, as permitted by this Agreement, Exchange Water is delivered through the Advance Delivery Agreement it shall be delivered at Imperial Dam unless CVWD and MWD agree that a delivery shall be made at the Whitewater Service Connections. In making the determination regarding delivery of Exchange Water at Imperial Dam or at the Whitewater Service Connections, the Parties shall cooperate to deliver Exchange Water at the point of delivery which provides the maximum flexibility to CVWD, except that delivery shall be arranged at Imperial Dam when Metropolitan determines that it needs to optimize the use of the Colorado River Aqueduct.

2.7 **Costs of Supply.** CVWD shall purchase the Entitlement Water from Metropolitan at a payment ("Costs of Supply Payment"), equivalent to \$60 per acre-foot in year 1999. This Costs of Supply Payment shall be annually adjusted according to the percentage change in State Water Project variable water delivery costs incurred compared to those costs incurred in the base year 1999. State Water Project variable water delivery costs shall include variable OMP&R, off-aqueduct power facilities charges, and future State Water Project costs paid by Metropolitan for variable water delivery costs and associated credits. An example of this adjustment is attached and incorporated into this Agreement as Exhibit "A."

2.8 **Costs of Delivery of Entitlement Water.** Metropolitan shall request DWR, as operator of the State Water Project, to deliver the Entitlement Water to Metropolitan at the Devil Canyon Afterbay (Reach 26A). Metropolitan shall pay to DWR all costs for the delivery of Entitlement Water.

2.9 **Costs of Delivery of Exchange Water.** Metropolitan shall arrange for the delivery of Exchange Water to CVWD at the points of delivery set forth in Section 2.6 (Points of Delivery). CVWD shall be responsible for any costs and arrangements associated with the transportation of the Exchange Water from Imperial Dam through the All American and Coachella Canals after delivery at Imperial Dam. If the Exchange Water is delivered at the Whitewater Service Connections, CVWD shall pay Metropolitan the Supplemental Energy Cost for delivery of the Exchange Water.

2.10 **Requests to Eliminate or Reduce Water Deliveries.**

2.10.1 **CVWD Requests.** CVWD may request that Metropolitan not deliver all or a portion of Exchange Water for a given year. Such request shall be made by September 1st of each year for deliveries to be made and/or arranged in the following calendar year. At its option, Metropolitan may accept or deny such request with Metropolitan's response due 30 days from CVWD's request. If Metropolitan accepts the request, Metropolitan shall not deliver the amount of the reduction in Exchange Water to CVWD in the following year and CVWD shall only make

the Costs of Supply Payment and the payment otherwise required by Section 2.9 (Costs of Delivery of Exchange Water) for the accepted reduced amount. If Metropolitan denies the request, CVWD shall remain obligated for making the Costs of Supply Payment to Metropolitan whether or not CVWD takes physical delivery of the Exchange Water for that year, as well as any payment otherwise required by Section 2.9 (Costs of Delivery of Exchange Water). If CVWD requests an increase in the amount of the Exchange Water during the calendar year, CVWD shall pay Metropolitan the Costs of Supply Payment and the payment otherwise required by Section 2.9 (Costs of Delivery of Exchange Water) no later than 10 days after Metropolitan's approval of the request, which shall be the Due Date for such payments.

2.10.2 **Metropolitan Requests.** Metropolitan may request that CVWD not take delivery of all or a portion of Exchange Water for a given year due to water shortages in Metropolitan's service area. Such request may be made at any time. At its option, CVWD may accept or deny such request with CVWD's response due 30 days from Metropolitan's request. If CVWD accepts such request or fails to respond within thirty (30) days, Metropolitan shall not be obligated to deliver Exchange Water for that year and CVWD shall not be obligated to make costs of supply payment to Metropolitan. If CVWD denies such request, Metropolitan shall be obligated to deliver Exchange Water under the terms of this Agreement.

2.11 **Payment.**

2.11.1 **Payment Schedule.** Metropolitan shall pay DWR the costs associated with the Entitlement Water including delivery. Metropolitan shall, on or after June 30 of each year invoice CVWD for the adjusted \$60.00 per acre-foot for 35,000 AF of water for that calendar year pursuant to Section 2.7 (Costs of Supply) plus all other costs pursuant to Section 2.9 (Costs of Delivery of Exchange Water). If less than 35,000 AF are delivered or adjustments are made by DWR to past billings, those additional costs or credits will be incorporated by Metropolitan into a subsequent billing of CVWD. Metropolitan shall provide billings and adjustments on an annual basis.

2.11.2 **Method of Payment to CVWD.** Every payment to CVWD required under this Agreement must be made in lawful money of the United States of America, to the order of CVWD and paid by wire transfer. The initial wire transfer instructions are as follows:

COACHELLA VALLEY WATER DISTRICT

Wire to:

Union Bank of California

445 S. Figueroa Street

Los Angeles, CA 90071

ABA No. 122000496

Contact Person: Donna Tredway

Credit to:

Coachella Valley Water District

Account No. 2740013028

CVWD may change these wire transfer instructions by giving notice in accordance with Section 4.9 (Notices) below.

2.11.3 **Method of Payment to Metropolitan.** Any payment to Metropolitan that may be required under this Agreement must be made in lawful money of the United States of America, to the order of Metropolitan and paid by wire transfer. The initial wire transfer instructions are as follows:

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Wire to:

Bank of America

Metropolitan Water District of Southern California

Credit to:

Account No. 1459350937

ABA No. 121000358

Metropolitan may change these wire instructions by giving notice in accordance with Section 4.9 (Notices) below.

2.11.4 **Delinquent Payments.** Payment of the amounts required by this Agreement shall be delinquent if not received by CVWD or Metropolitan, as appropriate before the close of crediting activity on the Due Date. In the event that a Party is delinquent in the payment of any amount required, that Party shall pay an additional charge equal to two percent (2%) of the delinquent payment each month or portion thereof that such payment remains delinquent, provided however, that if the total period of delinquency does not exceed five (5) business days, the additional charge shall be equal to one percent (1%) of the delinquent payment.

2.12 **Use of Water.** CVWD shall not, absent the express written consent of Metropolitan, transfer, sell or permit usage of the Entitlement Water or the Exchange Water outside of its boundaries.

2.13 **Reliability of Exchange Water.** The Parties hereto acknowledge that DWR cannot guarantee the delivery of State Water Project Water, including the Entitlement Water, due to acts of God or reasons beyond the control of DWR, including without limitation dry hydrology. Notwithstanding the foregoing, Metropolitan shall be obligated to deliver annually to CVWD the full 35,000 AF of Exchange Water provided that CVWD is in compliance with its obligations under this Agreement and that CVWD has not made a request pursuant to Section 2.10 (Request to Eliminate or Reduce Deliveries). If CVWD has requested a reduction which has been approved by Metropolitan, Metropolitan shall be subject to the requirements of this Section as to such approved reduced amount.

2.14 **Advance Delivery of Exchange Water.** Metropolitan may opt to deliver to CVWD its full allocation of Exchange Water from stored advance delivery water as provided for in the 1984 Advance Delivery Agreement (including any future amendments). In such case, such stored advance delivery water shall be deemed delivered to CVWD. It shall be CVWD's obligation to access such water.

2.15 **Operational Discretion.** If deliveries are at the Whitewater Service Connections, Metropolitan's Chief Executive Officer shall have the right, upon giving reasonable written notice in advance thereof to CVWD, to control, curtail, interrupt or suspend the delivery of the Exchange Water to CVWD through the Colorado River Aqueduct whenever he/she shall reasonably determine that any such action is required for the proper inspection, repair, maintenance or operation of the Colorado River Aqueduct. Such notice shall be given to CVWD in the same manner as Metropolitan would notify a member agency pursuant to Metropolitan's Administrative Code. Metropolitan shall if possible deliver to CVWD the full 35,000 AF of Exchange Water in a year where there is such a shutdown of the Colorado River Aqueduct.

2.16 **Measurements of Deliveries.**

2.16.1 **Entitlement Water.** Deliveries of Entitlement Water shall be measured by measuring devices and equipment installed at the delivery structures for delivery of water from the State Water Project pursuant to Metropolitan's State Water Contract. All costs with respect to such measuring devices and equipment shall be borne by Metropolitan as provided in Article 11 of Metropolitan's State Water Contract, except that costs incurred for inspection of such devices and equipment made by or at the request of CVWD shall be paid or reimbursed to Metropolitan by CVWD.

2.16.2 **Exchange Water.** All Exchange Water delivered by Metropolitan to CVWD at the Whitewater Service Connections shall be measured by measuring devices and equipment installed at the delivery structure or structures at which Exchange Water is delivered by Metropolitan to CVWD. CVWD shall have the right, at any time, to require that any such device at the Whitewater Service Connections be tested for accuracy. Costs of testing measuring devices for Exchange Water shall be at the expense of the requesting party.

2.17 **Cessation of Deliveries.**

2.17.1 **Exchange Water.** Metropolitan shall not be liable to CVWD for any damages or liability arising from a failure of Metropolitan to deliver Exchange Water, which failure results either from a cessation or reduction of flow of water in the Colorado River Aqueduct below the quantities required from time to time for delivery to CVWD under this Agreement or from Metropolitan's exercise of rights pursuant to Section 2.14 (Advance Delivery of Exchange Water). CVWD shall defend and indemnify Metropolitan, its directors, officers, employees, agents, and representatives from and against any and all claims and liabilities which may result in any manner or to any extent from any such failure, or from any action or inaction by CVWD or its directors, officers, employees, agents or representatives done or made with respect to the receipt and

distribution by CVWD of the Exchange Water, including but not limited to, the construction, reconstruction, operation, maintenance, removal and repair of facilities necessary or used therefor.

2.17.2 **Entitlement Water.** CVWD shall not be liable to Metropolitan for any damages or liability arising from a failure of DWR to deliver the Entitlement Water to Metropolitan, which failure results from a cessation or reduction of flow of water in the State Water Project below the quantities required from time to time for delivery to Metropolitan under this Agreement. Metropolitan shall defend and indemnify CVWD, its directors, officers, employees, agents and representatives from and against any and all claims and liability which may result in any manner or to any extent from any such failure, or from any action or inaction by Metropolitan, its directors, officers, employees, agents or representatives done or made with respect to the receipt and distribution by Metropolitan of the Entitlement Water, including but not limited to, the construction, reconstruction, operation, maintenance, removal and repair of facilities necessary or used therefore.

ARTICLE 3

TERM

3.1 **Term.** The term of this Agreement shall commence on the effective date ("Effective Date") of the Quantification Settlement Agreement and shall end, on the earlier of the termination of the Quantification Settlement Agreement, or the expiration of Metropolitan's State Water Project Contract. So long as the Quantification Settlement Agreement has not terminated and Metropolitan's State Water Project Contract has been extended or replaced with a longer term agreement, this Agreement will automatically renew for a period coincident with the Quantification Settlement Agreement or the term of Metropolitan's State Water Project Contract, whichever terminates earlier.

3.2 **Effect of Termination.** At the end of the term of this Agreement, Metropolitan's obligation to deliver the Entitlement Water shall end. If a claim arising under this Agreement has not been resolved such provisions of this Agreement shall continue in full force and effect as are necessary for the purpose of resolving such claims to satisfy the rights and obligations of the Parties hereto. Upon resolution of any such claims, this Agreement shall terminate.

GENERAL PROVISIONS

4.1 **Force Majeure.** If the performance, in whole or in part, of the obligations of the respective parties under this Agreement is hindered, interrupted or prevented by wars, strikes, lockouts, fire, acts of God or by other acts of military authority, or by any cause beyond the control of the respective parties hereto, whether similar to the causes herein specified or not, such obligations of the respective parties under this Agreement shall be suspended to the extent and for the time the performance thereof is affected by any such act. Upon the cessation of any such hindrance, interruption or prevention, both parties shall become obligated to resume and continue performance of their respective obligations under this Agreement. Notwithstanding any

act described in this Section, the parties shall diligently undertake all reasonable effort to perform this Agreement.

4.2 **Inspection of Records.** Each Party shall maintain and make available for inspection by the other Party, during regular office hours, accurate records pertaining to the times and amounts of Exchange Water and Entitlement Water deliveries and to the costs, disbursements and receipts with respect to the delivery of the Exchange Water and the Transfer Water.

4.3 **Ambiguities.** Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

4.4 **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of California.

4.5 **Binding Effect; No Assignment.** This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. Neither Party may assign any of its rights or delegate any of its duties under this Agreement. Any assignment or delegation made in violation of this Agreement is void and of no force or effect.

4.6 **Representations.** Any person signing this Agreement represents that he/she has full power and authority to do so, and, that his/her signature is legally sufficient to bind the Party on whose behalf he/she is signing.

4.7 **Enforceability; Waiver.** In the event that any term or condition of this Agreement is determined to be invalid, illegal or otherwise unenforceable, such determination shall have no effect on the other terms and conditions which shall continue to be binding on the Parties hereto. Lack of enforcement of any term or condition of this Agreement shall not be construed as a waiver of any rights conferred by such term or condition. Unless otherwise agreed to in writing, the failure of any Party to require the performance by any other Party of any provision hereof shall in no way affect the full right to require such performance at any time thereafter, nor shall the waiver of any provision hereof on one occasion be taken or held to be a waiver of the provision itself.

4.8 **Entire Agreement.** This Agreement contains the entire understanding of the Parties with respect to the 35,000 AF Entitlement Delivery and Exchange between Metropolitan and CVWD that is the subject of this Agreement, and supercedes any prior and contemporaneous understandings or agreements of the Parties. Neither Party has been induced to enter into this Agreement by, nor is either Party relying on, any representation or warranty outside those expressly set forth in this Agreement. This Agreement can be amended only in writing signed by both Parties.

4.9 **Notices.** Any communication, notice or demand of any kind whatsoever which any Party may be required or may desire to give to or serve upon the other Party, shall be in writing and delivered by personal service (including express or courier service), by electronic communication, whether by telex, telegram or telecopying, if confirmed in writing, sent by registered or certified mail, postage prepaid, return receipt requested, or by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

CVWD: Coachella Valley Water District
Attention: General Manager-Chief Engineer
P.O. Box 1058
Coachella, California 92236

For personal or overnight delivery:

Coachella Valley Water District
Attention: General Manager-Chief Engineer
Avenue 52 and Highway 111
Coachella, California 92236

Telephone: 760-398-2651
Fax: 760-398-3711

Metropolitan: The Metropolitan Water District of
Southern California
Attention: Chief Executive Officer
P.O. Box 54153
Los Angeles, California 90054-0153

For personal or overnight delivery:

The Metropolitan Water District of
Southern California
Attention: Chief Executive Officer
700 N. Alameda Street
Los Angeles, California 90012

Telephone: 213-217-6000
Fax: 213-217-6650

Any Party may change its address for notice by written notice given to the other Party in the manner provided in this section. Any such communication, notice or demand shall be deemed to have been duly given or served on the day personally served, if by personal service; one (1) day after the date of confirmed dispatch, if by electronic communication, or three (3) days after being placed in the U.S. mail, if mailed. A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective

as of the first date that that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

4.10 **Further Performance.** Each Party agrees to perform any further acts and to execute and deliver any documents, which may be reasonably necessary to carry out the provisions of this Agreement.

4.11 **Time of the Essence.** Time is of the essence of and under this Agreement and of every provision thereof.

4.12 **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon, provided such signature page is attached to another counterpart identical thereto, except for having additional signature pages executed by other Parties to this Agreement attached thereto.

4.13 **No Third-Party Rights.** This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns, if any. Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

4.14 **Attorney's Fees.** In the event of any legal action or proceeding arising from or related in any way to breach of or enforcement or interpretation of this Agreement, the prevailing party shall be entitled to recover from the other party or parties reasonable attorney's fees and court costs in such amounts as shall be allowed by the court.

4.15 **Retention of Water Rights.** Except as specifically provided for herein, this Agreement shall not be construed as a conveyance, abandonment or waiver of any water right, nor shall it be construed as conferring any right whatsoever upon any person, firm, corporation or other public or private entity not a party to this Agreement.

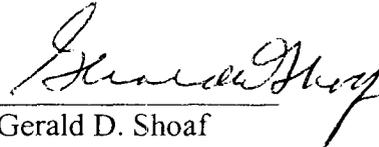
4.16 **Recitals.** All of the Recitals are hereby incorporated by this reference to the same extent as though herein set forth.

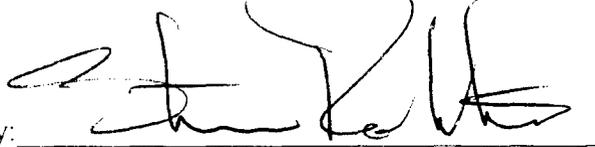
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4.17 **Dispute Resolution.** In the event of a dispute, within thirty (30) days of the Parties identifying the existence of a dispute, the General Manager of CVWD and the Chief Executive Officer of Metropolitan shall meet and attempt to resolve the dispute to their mutual satisfaction. Any such resolution shall be in writing and be binding on the Parties.

Approved as to Form:

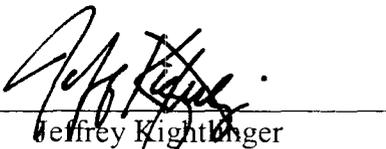
COACHELLA VALLEY WATER DISTRICT

By: 
Gerald D. Shoaf
General Counsel

By: 
Steve Robbins
General Manager-Chief Engineer

Approved as to Form

THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

By: 
Jeffrey Kightlinger
General Counsel

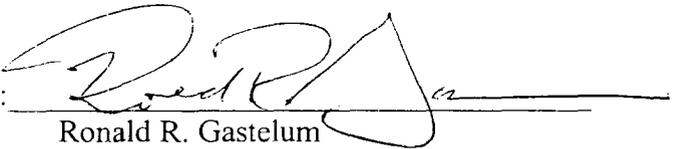
By: 
Ronald R. Gastelum
Chief Executive Officer

EXHIBIT A

EXHIBIT A

Adjustment to Cost of Supply

Basic Formula/Definition of Terms

Adjusted Cost of Supply = (35,000 AF) x (\$60/AF) x (Adjustment Factor)

Adjustment Factor = (Current Year's Unit Power Costs / 1999 Unit Power Cost)

Current Year's Unit Power Costs = Melded Variable OMP&R and Off-Aqueduct Power
Facility Costs + Future (Unidentified) Variable Cost

1999 Unit Power Cost = 1999 Melded Variable OMP&R and
Off-Aqueduct Power Facility Costs

Example Calculation for Year 2001

Assumptions:

Melded Variable OMP&R and
Off-Aqueduct Power Facility Cost for 2001 = 25.0 Mills/KWhr

Future (Unidentified) Variable Cost = 0 Mills/KWhr

Melded Variable OMP&R and
Off-Aqueduct Power Facility Cost for 1999 = 19.43 Mills/KWhr

Adjustment Factor Calculation:

$(25.0 \text{ Mills/KWhr} + 0 \text{ Mills/KWhr}) / (19.43 \text{ Mills/KWhr}) = 1.287$

Adjustment Cost of Supply Calculation:

$(35,000 \text{ AF}) \times (\$60/\text{AF}) \times (1.287) = \$2,702,007$

MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

December 23, 2003

Mr. Steve Robbins
General Manager
Coachella Valley Water District
P.O. Box 1058
Coachella, CA 92236

Dear Mr. Robbins:

Agreement to Credit CVWD for Colorado River Water Deliveries During 2003

This letter agreement entered into through my signature on behalf of the Metropolitan Water District of Southern California, when accepted by you on behalf of Coachella Valley Water District, will constitute Metropolitan's and Coachella's agreement to the following terms and conditions governing the pumping by Metropolitan of quantities of water which Coachella is physically unable to put to use from deliveries off of the Coachella Canal during 2003. This agreement is nonprecedential and unique since some of the quantities of water result being made available to Metropolitan may be the result of measures taken by Coachella to enhance its Colorado River supplies in 2003 before the Quantification Settlement Agreement was executed. These measures included a short term fallowing program within the Palo Verde Irrigation District. In future years, Metropolitan anticipates that it will receive any water that Coachella is unable to put to beneficial use without compensation to Coachella.

The terms and conditions of this agreement are as follows:

1. Pursuant to concurrence with the Bureau of Reclamation, Coachella agrees to allow Metropolitan to take delivery of all approved but unused California agricultural water supplies that may become available in 2003. Metropolitan shall be responsible for all power delivery costs associated with its diversion of such water into its Intake Pumping Plant and through the Colorado River Aqueduct.

Mr. Steve Robbins
Page 2
December 23, 2003

2. Metropolitan will provide a credit to Coachella for water deliveries received in 2003 that would have otherwise been made available to Coachella. If Metropolitan receives at least 40,000 acre-feet of unused water from Coachella, Metropolitan will credit Coachella with 32,000 acre-feet. If Metropolitan receives less than 40,000 acre-feet of unused Coachella water, Metropolitan will credit Coachella equal to 80% of the amount of water received by Metropolitan.
3. With the concurrence of Reclamation, the credits provided to Coachella pursuant to paragraph 2 above shall be returned to Coachella by Metropolitan's forbearance of pumping of a portion of its approved water order at its Intake Pumping Plant. The maximum amount of forbearance will be fifty percent of the total water credited pursuant to paragraph 2, in each of 2007 and 2008; provided, however, that upon Coachella's request Metropolitan shall delay that the forbearance to a subsequent year. Metropolitan shall have no responsibility to ensure that the resulting forborne water provided for by this paragraph is subsequently delivered to Coachella. Coachella and Metropolitan may agree to terms and conditions that would allow the credited water to be delivered at the Whitewater turnout on Metropolitan's Colorado River Aqueduct.
4. Metropolitan shall not be liable to Coachella for any damages or liability arising from deliveries of water into the groundwater basin underlying Coachella whether pursuant to this agreement or other existing agreements provided that such water is of the same quality as other Colorado River water available at the Intake Pumping Plant with due consideration to the impacts of normal aqueduct operational practices, including but not limited to groundwater program activities. Coachella shall defend and indemnify Metropolitan, its directors, officers, employees, agents and representatives from and against any and all claims of liabilities which may result in any manner or to any extent from all previous, current and future deliveries of such water into such groundwater basin.

Mr. Steve Robbins
Page 3
December 23, 2003

5. All provisions of other existing agreements between and among Metropolitan and Coachella providing for usage of the Colorado River Aqueduct shall remain in full force and effect. Water credited to Coachella pursuant to this agreement, shall be considered Exchange Water for purposes of Section 16(a)(Liability) of the July 7, 1963 Agreement between The Metropolitan Water District of Southern California and the Coachella Valley Water District for exchange of water.

If you concur with the agreement terms, please execute this letter agreement and return to me at your earliest convenience. If you have any questions, please contact Mr. Dennis Underwood, Vice President of Colorado River Resources, at (213) 217-6588.

Sincerely,



Ronald R. Gasterum
Chief Executive Officer

ACCEPTED AND AGREED TO:

Steve Robbins, General Manager
Coachella Valley Water District

Date: _____

WJH:admin
a:\s\corres\WH_CVWD-MWD Agreement1

Mr. Steve Robbins
Page 4
December 23, 2003

bcc: S. N. Arakawa
R. R. Gastelum
W. Hasencamp
J. Kightlinger
J. C. Lambeck
D. Marks
J. Matusak
J. Oley
E. Rigdon
A. Sienkiewich
D. Underwood

**AMENDMENT TO THE AGREEMENT TO SUPPLEMENT APPROVAL
AGREEMENT BETWEEN
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA AND
COACHELLA VALLEY WATER DISTRICT**

THIS AMENDMENT to the December 19, 1989 Agreement to Supplement Approval Agreement is made and entered into the 10th day of October, 2003, by and between The Metropolitan Water District of Southern California, a California metropolitan water district (MWD) and Coachella Valley Water District, a California county water district (CVWD) each of which is at times referred to individually as "Party" and which are at times collectively referred to as "Parties".

RECITALS

RECITALS, A. through F. in the Agreement to Supplement Approval Agreement (Supplemental Agreement) remain in effect and the Recitals are hereby amended with the addition of Recital G. as follows:

"G. The parties desire to amend the Supplemental Agreement as contemplated by the Quantification Settlement Agreement, dated October 10, 2003 (the "Quantification Settlement Agreement") and the related Acquisition Agreements as defined therein.

NOW THEREFORE, for and in consideration of amended mutual obligations and undertakings set forth herein, the Parties hereby agree as follows:

1. **AMENDMENT TO ARTICLE I**

On Pages 2 and 3, Article I, Use of Conserved Water, is deleted in its entirety.

2. **AMENDMENT TO SECTION 3.1**

On Page 4, the fourth line of the first full paragraph after the word "later." delete "Thereafter, the term of this Supplemental Agreement shall be coextensive with the terms of the Conservation Agreement and Approval Agreement." and insert "The term of this Agreement will extend to the later of December 31, 2041, or 270 days beyond the termination of the Quantification Settlement Agreement."

Section 3.1 will read, as amended, as follows:

"Section 3.1: This Supplemental Agreement shall be effective on the date the Conservation Agreement and Approval Agreement become effective or the date on which the last Party to the Supplemental Agreement executes it, whichever is later. The term of

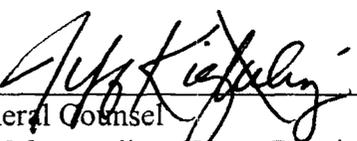
this Agreement will extend to the later of December 31, 2041, or 270 days beyond the termination of the Quantification Settlement Agreement.”

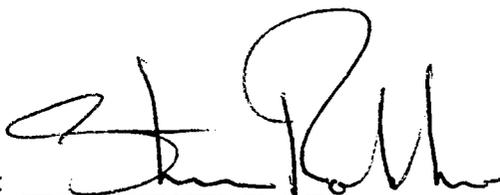
3. THE AMENDMENTS CONTEMPLATED BY THIS AMENDMENT TO THE SUPPLEMENTAL AGREEMENT, will take effect upon the Effective Date as defined in the Quantification Settlement Agreement.
4. TERMINATION. Except for the amendment to Section 3.1, provided in Section 2 herein, the amendments made by this Amendment to the Supplemental Agreement will terminate and be of no force or effect upon the termination of the Quantification Settlement Agreement.
5. AGREEMENT TO GOVERN. This Amendment shall be interpreted in a manner consistent with, and in furtherance of the objectives of, the Quantification Settlement Agreement and the related Acquisition Agreements. Except as provided in this Amendment to the Supplemental Agreement, the Supplemental Agreement’s mutual obligations and undertakings shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment to the Supplemental Agreement on the day and year first above written.

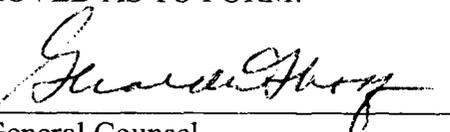
By: 
Chief Executive Officer
The Metropolitan Water District of
Southern California

APPROVED AS TO FORM:

By: 
General Counsel
The Metropolitan Water District of
Southern California

By: 
General Manager-Chief Engineer
Coachella Valley Water District

APPROVED AS TO FORM:

By: 
General Counsel
Coachella Valley Water District

**AGREEMENT BETWEEN THE METROPOLITAN
WATER DISTRICT OF SOUTHERN CALIFORNIA
AND THE CALIFORNIA DEPARTMENT OF FISH AND GAME
FOR THE PAYMENT BY METROPOLITAN OF TWENTY DOLLARS
PER ACRE-FOOT OF SPECIAL SURPLUS COLORADO RIVER WATER
RECEIVED BY METROPOLITAN**

THIS AGREEMENT (“Agreement”) is made and entered into as of October 10, 2003, between The Metropolitan Water District of Southern California (hereinafter “Metropolitan”) and the California Department of Fish and Game (hereinafter the “Department”). Metropolitan and the Department are sometimes referred to collectively as the “Parties,” or singularly as a “Party.”

RECITALS

A. The Department is a department of the California Resources Agency with jurisdiction over the conservation, protection, restoration, enhancement and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species under the California Endangered Species Act (Fish and Game Code section 2050 *et seq.*), and other relevant state laws.

B. Metropolitan is a public agency of the State of California incorporated under the Metropolitan Water District Act, Stats. 1969, ch. 209, as amended, codified at Section 109.1 *et seq.* of the Appendix to the California Water Code, engaged in transporting, storing and distributing water in the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura, within the State of California.

C. Section 2081.7 of the California Fish and Game Code was amended by an Act (Stat. 2003 Chap. 612) commonly referenced as SB 317 (the "Kuehl Bill") which was adopted by the California Legislature to facilitate implementation of the Quantification Settlement Agreement dated October 10, 2003 among Metropolitan, the Imperial Irrigation District ("IID") and the Coachella Valley Water District (the "QSA"). Also adopted by the California Legislature contemporaneously with the Kuehl Bill in connection with the QSA were two other Acts (Stat. 2003 Chaps. 611 and 613) commonly referenced as SB 277 (the "Ducheny Bill") and SB 654 (the "Machado Bill") (the Kuehl Bill, the Ducheny Bill and the Machado Bill are referred to collectively herein as the "QSA Legislation"). Section 2081.7(c)(5), as amended, contemplates that Metropolitan and the Department will enter into this Agreement and requires, in effect, that Metropolitan pay into the Salton Sea Restoration Fund established in accordance with the Ducheny Bill and administered by the Director the sum of twenty dollars (\$20), as adjusted annually for inflation, for each acre-foot of special surplus Colorado River water received by Metropolitan as a result of the reinstatement of certain provisions of the federal Interim Surplus Guidelines (as defined below), subject to certain deductions in the quantity of water subject to this imposition and to the availability of certain credits to Metropolitan deriving from certain expenditures of the Salton Sea Restoration Fund.

D. The California Department of Water Resources ("DWR") and Metropolitan have entered into an agreement of even date herewith for the acquisition by Metropolitan of up to 1.6 million acre-feet of Colorado River water conserved by IID (the "DWR/MWD Acquisition Agreement"), as contemplated by Section 2081.7(c)(4) of the California Fish and Game Code, as amended by the Kuehl Bill.

AGREEMENT

NOW THEREFORE, the Parties in consideration of the foregoing recitals and the representations, warranties, covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, Metropolitan and the Department agree to the following terms and conditions of this Agreement:

I.

DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Definitions. As used in this Agreement these terms, including any grammatical variations thereof, have the following meanings:

(a) “Adjusted Amount” means the Basic Amount, as adjusted pursuant to the Price Adjustment Method as of the beginning of each Year after the first Year of this Agreement.

(b) “Administrative Code” means Metropolitan’s Administrative Code, adopted on January 13, 1987, as amended from time to time, and as in existence on the date of this Agreement, subject to modification to the extent provided in Paragraph 10.10 of this Agreement.

(c) “Arizona Payback Water” means Colorado River water that otherwise would have been available for Consumptive Use by Metropolitan that Metropolitan is required to make available to the State of Arizona or to any agency of such State (“Arizona”) by exchange, reduction in use or any other means, as a result of any basic apportionment shortage suffered by Arizona in any calendar year that the Interim Surplus

Guidelines are in effect or in any calendar year after 2016 prior to the day on which a Flood Control Surplus Release is made by the United States Bureau of Reclamation.

(d) “Basic Amount” means, at any point in time, twenty dollars (\$20.00) per acre-foot of Special Surplus Water, as defined herein.

(e) “Bureau Decree Accounting Record” means the annual compilation by the Bureau of Reclamation of the United States Department of the Interior of records in accordance with Article V of the Decree of the Supreme Court of the United States in Arizona v. California dated March 9, 1964.

(f) “Consumptive Use” means the diversion of water from the main stream of the Colorado River, net of measured and unmeasured return flows. “Consumptively Used” is a grammatical variation of “Consumptive Use.”

(g) “Department” means the California Department of Fish and Game, as defined in Recital A.

(h) “Director” means the Director or Acting Director of the Department.

(i) “DWR” is as defined in Recital D.

(j) “DWR/MWD Acquisition Agreement” is as defined in Recital D, as the same may be amended from time to time.

(k) “Flood Control Surplus Release” means the release of Colorado River Water for purposes of the flood control operation of Hoover Dam and Lake Mead pursuant to the reservoir operating criteria agreement between the United States Army Corps of Engineers and the Bureau of Reclamation of the United States Department of the Interior.

(l) "IID" is as defined in Recital C.

(m) "Interim Surplus Guidelines" means the guidelines used annually by the United States Secretary of the Interior to determine the availability of surplus Colorado River water for release from Lake Mead and use within the states of Arizona, Nevada and California through calendar year 2016, as set forth in the Secretary's record of decision dated January 16, 2001, including access to Special Surplus Water, as reinstated contemporaneously with the execution of the QSA.

(n) "Metropolitan" means The Metropolitan Water District of Southern California.

(o) "MWD Credits" means the dollar-for-dollar credits to be provided to Metropolitan pursuant to the last sentence of section 2081.7(c)(5) of the California Fish and Game Code, as amended by the QSA Legislation, against any future mitigation obligations of Metropolitan under the Lower Colorado River Multi-Species Conservation Program, as determined and applied in accordance with Paragraph 7.5.

(p) "Price Adjustment Method" means an adjustment to the Adjusted Amount as of January 1, 2004, and as of each January 1 thereafter through 2016, to reflect the change in the annual average since the date hereof (prorating any change for 2003) in the Consumer Price Index for all Urban Consumers-All Items (sometimes called the CPI-U) for Los Angeles – Riverside – Orange County, CA, as published by the United States Bureau of Labor Statistics.

(q) "QSA" is as defined in Recital C.

(r) "QSA Legislation" is as defined in Recital C.

(s) "Quantified Surplus Release" means the release of Colorado River water pursuant to the Bureau of Reclamation's reservoir spill avoidance strategy, otherwise known as the 70R Strategy, as it may then be in effect.

(t) "Record Release Date" means the date on which the Bureau Decree Accounting Record is released to the public.

(u) "Report" means an annual report by Metropolitan setting forth the quantity of Special Surplus Water Consumptively Used by it in the Year covered by such report and the amount of Metropolitan's obligation under Paragraph 3.1 for such Year, as determined and justified by Metropolitan with reasonable specificity in such Report, based on the Bureau Decree Accounting Record for such Year and on any other relevant federal documents, subject to audit by the Department pursuant to Paragraph 10.12.

(v) "Salton Sea Restoration Fund" means the fund administered by the Director and established by the California Legislature pursuant to, Chapter 13, Division 3, of the California Fish and Game Code, as added by the QSA Legislation, and into which the payments by Metropolitan under this Agreement are to be deposited.

(w) "Special Surplus Water" means the quantity in acre-feet of Surplus Water that is Consumptively Used by Metropolitan in any Year; provided, however, that in any Year in which there is a Flood Control Surplus Release or a Quantified Surplus Release, the quantity of Special Surplus Water for that Year for purposes of this Agreement shall be deemed to be zero.

(x) "Surplus Water" means the quantity of Colorado River water released by the United States Bureau of Reclamation pursuant to section 2.B. of the Interim Surplus

Guidelines and Consumptively Used by Metropolitan in any Year in excess of the sum of (i) the quantity of such water which would have been released in that Year by the Bureau of Reclamation in a normal or shortage condition pursuant to section 2.A. of such Guidelines and which would have been made available to Metropolitan, (ii) the quantity of unused basic apportionment water released by the Bureau of Reclamation and Consumptively Used by Metropolitan in that Year pursuant to section 1.B. of such Guidelines, and (iii) the quantity of any Arizona Payback Water in that Year.

(y) “Year” means the period commencing on the date hereof and ending on the immediately following December 31, and each calendar year thereafter during the term of this Agreement.

1.2 Rules of Construction.

(a) Unless the context clearly requires otherwise:

- (i) The plural and singular forms include the other;
- (ii) “Shall,” “will,” “must,” and “agrees” are each mandatory;
- (iii) “May” is permissive;
- (iv) “Or” is not exclusive;
- (v) “Includes” and “including” are not limiting; and
- (vi) “Between” includes the ends of the identified range.

(b) Headings at the beginning of articles, paragraphs and subparagraphs of this Agreement are solely for the convenience of the Parties, are not a part of this Agreement and shall not be used in construing it.

(c) The masculine gender shall include the feminine and neuter genders and vice versa.

(d) The word "person" shall include individual, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture, governmental authority, water district and other entity of whatever nature, except either Metropolitan or the Department or an officer or employee thereof.

(e) Except as specifically provided herein, reference to any agreement (including this Agreement), document, or instrument means such agreement, document, instrument as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof.

(f) Except as specifically provided herein, reference to any law, statute, ordinance, regulation or the like means such law as amended, modified, codified or reenacted, in whole or in part, and in effect from time to time, including any rules and regulations promulgated thereunder.

II.

REPRESENTATIONS AND WARRANTIES

2.1 Representations and Warranties of Metropolitan. As a material inducement to the Department to enter into this Agreement, Metropolitan represents and warrants as follows:

(a) Metropolitan is a metropolitan water district, duly organized, validly existing and in good standing under the laws of the State of California, and subject to

satisfaction or waiver of the conditions set forth in Paragraph 6.1, Metropolitan has all necessary power and authority to perform its obligations hereunder on the terms set forth in this Agreement, and the execution and delivery hereof by Metropolitan and the performance by Metropolitan of its obligations hereunder will not violate or constitute an event of default under the terms or provisions of any agreement, document or instrument to which Metropolitan is a party or by which Metropolitan is bound.

(b) Subject to the satisfaction or waiver of the conditions, as and to the extent provided in Paragraph 6.1, this Agreement is a valid and binding obligation of Metropolitan, enforceable in accordance with its terms, subject to the requirements of applicable law.

2.2 Representations and Warranties of the Department. As a material inducement to Metropolitan to enter into this Agreement, the Department represents and warrants as follows:

(a) The Department has all necessary power and authority to perform its obligations hereunder on the terms set forth in this Agreement.

(b) This Agreement is a valid and binding obligation of the Department, enforceable in accordance with its terms, subject to the requirements of applicable law.

III.

METROPOLITAN'S ANNUAL PAYMENT OBLIGATION TO THE SALTON SEA RESTORATION FUND

3.1 Amount of Annual Obligation. Metropolitan shall be obligated to pay to the Salton Sea Restoration Fund for each Year commencing in 2004 an amount, if any, equal to the

greater of the Basic Amount or the Adjusted Amount multiplied by the number of acre-feet of Special Surplus Water Consumptively Used by it in that Year.

3.2 Measurement of Special Surplus Water. Metropolitan will provide to the Department by facsimile, within 90 days following the Record Release Date of the Bureau Decree Accounting Record for each Year, a Report pertaining to its Consumptive Use of Special Surplus Water in that Year.

IV.

PAYMENTS AND ACKNOWLEDGEMENTS

4.1 Metropolitan Payments. Metropolitan shall pay into the Salton Sea Restoration Fund within 90 days of the date of each Report, the amount, if any, correctly shown in such Report as Metropolitan's obligation under Paragraph 3.1 for the Year of the Report.

4.2 Department Acknowledgements. The Department will acknowledge by written notice to Metropolitan the receipt by the Salton Sea Restoration Fund of each payment received pursuant to Paragraph 4.1. Each notice will specify the date and amount of the subject payment and will be provided by facsimile to Metropolitan within 30 days of the date of the payment.

4.3 Metropolitan Refunds or Credits. In the event that Metropolitan incurs an obligation to the State of Arizona or to any agency of such State for Arizona Payback Water after the date of Metropolitan's payment under Paragraph 4.1, Metropolitan shall be entitled to a refund from the Salton Sea Restoration Fund equal to the amount of such Arizona Payback Water multiplied by the Basic Amount or the Adjusted Amount, whichever was used to determine the amount of Metropolitan's payment under Paragraph 4.1; provided, however, that the aggregate amount of any such refunds shall not exceed the sum of the payments made by Metropolitan

pursuant to this Agreement. Any such refund shall be paid to Metropolitan, with interest at the then California interagency lending rate from the date of such final payment, within 90 days of Metropolitan's notice to the Department setting forth the amount and basis for any such refund. If or to the extent that the Department determines that sufficient monies for payment of any such refund are not available or may not lawfully be withdrawn from the Salton Sea Restoration Fund at such time, the Department agrees that it will include the refund request in its next annual request for appropriation for the Salton Sea Restoration Fund. After December 31, 2016, any notice pertaining to a refund must be provided to the Department no later than 90 days after public notice of a Flood Control Surplus Release. In the event any such refund has not been paid by the Department to Metropolitan prior to the next payment becoming due from Metropolitan, Metropolitan shall show the refund due as a credit toward the payment due from Metropolitan to the Department, and shall deduct such credit in determining the net payment due from Metropolitan to the Department. In the event any such refund shall not be authorized or permitted under applicable law within three years from the date of the first such request, Metropolitan shall be entitled to receive the economic equivalent of such refund in the form of credits by the Department similar to the MWD Credits to be provided pursuant to Paragraph 7.5.

V.

TERM

5.1 Commencement and Termination. This Agreement will commence upon its execution by the Parties and will terminate upon the termination of the QSA; provided, however, that the possibility of a refund which may be due to Metropolitan in future years shall not be an

impediment to the expenditure of all assets of the Salton Sea Restoration Fund. Notwithstanding the foregoing, Metropolitan's payment obligation under Article III hereof shall terminate as of December 31, 2016.

VI. CONDITIONS

6.1 Conditions to Metropolitan's Obligations Under This Agreement.

(a) The QSA Legislation is and shall remain in full force and effect and is not amended or modified in any way that is inconsistent with subparagraph (b), or that imposes other requirements pertaining to Metropolitan's Consumptive Use of or entitlements to Colorado River water that are materially adverse to Metropolitan.

(b) Metropolitan does not have, nor will it incur, any liability or responsibility for environmental mitigation requirements (i) for this Agreement, (ii) for any conservation, transfer or other activities associated with the DWR/MWD Acquisition Agreement, or with the Transfer Agreement dated October 10, 2003, between IID and DWR or (iii) for the restoration of the Salton Sea, other than, in each case, as specifically provided in the QSA Legislation or in a written agreement to which Metropolitan is or becomes a signatory party. This limitation on liability and responsibility shall include but not be limited to mitigating impacts associated with rising salinity levels in the Salton Sea, air quality impacts, endangered species impacts and other potential impacts.

(c) Metropolitan is entitled to and will receive the benefit from any MWD Credits to the full extent contemplated by Paragraph 7.5.

6.2 Failure of Conditions. Unless waived by Metropolitan, upon a material failure of any condition described in Paragraph 6.1, any obligation of Metropolitan under Article III hereof shall thereupon be suspended until the earlier of the date any such condition is restored or remedied to the satisfaction of Metropolitan or the date this Agreement is terminated in accordance with Paragraph 5.1, at which time any suspended obligation of Metropolitan shall cease and become null and void without the need for further action by any Party.

VII.

COVENANTS

7.1 Applicable Laws. This Agreement and the activities described herein are contingent upon and subject to compliance with all applicable laws, including, to the extent applicable, the National Environmental Policy Act, Title 4, United States Code §§ 4321 et seq.; 40 Code of Federal Regulations §§1500.1 et seq., and the California Environmental Quality Act, California Public Resources Code Sections 21000 et seq.; 14 California Code of Regulations §§ 15000 et seq. This Agreement is also contingent upon and subject to any required regulatory approval by other California agencies. Metropolitan shall have no obligation or liability for costs and expenses in connection with any permits or approvals required as a result of this Agreement or for any such costs and expenses arising from expenditure of the funds paid by Metropolitan pursuant to this Agreement.

7.2 Impact on Acquisition Agreement. Nothing in this Agreement shall be construed to amend the DWR/MWD Acquisition Agreement.

7.3 Use of Proceeds by Salton Sea Restoration Fund. The Parties agree that the funds of the Salton Sea Restoration Fund derived from payments made pursuant to this Agreement are intended to be used for conservation measures, including the program referenced in Fish and Game Code Section 2031.7(d)(3), pursuant to a preferred alternative for restoration as provided in the QSA Legislation, and for measures required to mitigate for the adverse environmental effects caused by implementation of the preferred alternative.

7.4 Limitation on Liability for Environmental Mitigation Requirements. The Department agrees that Metropolitan shall have no liability or responsibility for any environmental mitigation requirements described in Paragraph 6.1(b).

7.5 Determination and Application of MWD Credits. Metropolitan shall receive a credit against future obligations which it may have under the Lower Colorado River Multi-Species Conservation Program (“LCR-MSCP”) for funds deposited into the Salton Sea Restoration Fund which are spent for measures which are consistent with the preferred restoration alternative and which contribute to the conservation or mitigation for species which are “covered species” under the LCR MSCP. The Department shall annually determine and inform Metropolitan of the sums spent from the Salton Sea Restoration Fund on restoration projects which contribute to the conservation or mitigation of species covered under the LCR MSCP.

7.6 Covenants of Good Faith. This Agreement is subject to reciprocal obligations of good faith and fair dealing.

VIII.

DISPUTE RESOLUTION

8.1 Reasonable Best Efforts to Resolve by Negotiation. The Parties shall exercise reasonable best efforts to resolve all disputes arising under this Agreement through negotiation between the Department's Regional Manager for Region 6 and Metropolitan's Environmental Planning Team Manager or, if such offices are not then being maintained in either case, between the representatives of the Party or Parties succeeding to the duties and responsibilities of such offices. If that negotiation is unsuccessful in resolving any such dispute, then the Director and the Chief Executive Officer of Metropolitan shall seek to resolve such dispute through direct negotiation between them. In the event such negotiation is unsuccessful, the Parties reserve their respective rights to all legal and equitable remedies.

8.2 Action or Proceeding Between the Parties. Each of the Parties may sue and be sued with respect to this Agreement.

IX.

REMEDIES

9.1 Remedies Generally. If a breach of this Agreement occurs, the non-breaching Party will have all rights and remedies provided at law or in equity against the breaching Party.

9.2 Cumulative Rights and Remedies. The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise

or delays in exercising any such right or remedy, the non-breaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power, or privilege precludes any other or further exercise of a right, power, or privilege granted by this Agreement or otherwise.

X.

GENERAL PROVISIONS

10.1 No Third-Party Rights. This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

10.2 Ambiguities. Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

10.3 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to conflict of laws provisions.

10.4 Binding Effect; No Assignment. This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. Neither Party may assign any of its rights or delegate any of its duties under this Agreement. Any assignment or delegation made in violation of this Agreement is void and of no force or effect.

10.5 Notices. All notices, requests, demands, or other communications under this Agreement must be in writing, and sent to both addresses of each Party. Notice will be sufficiently given for all purposes as follows:

- *Personal Delivery*. When personally delivered to the recipient. Notice is effective on delivery.
- *First-Class Mail*. When mailed first-class, postage prepaid, to the last address of the recipient known to the Party giving notice. Notice is effective five mail delivery days after it is deposited in a United States Postal Service office or mailbox.
- *Certified Mail*. When mailed certified mail, return receipt requested. Notice is effective on receipt, if a return receipt confirms delivery.
- *Overnight Delivery*. When delivered by an overnight delivery service such as Federal Express, charges prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.
- *Facsimile Transmission*. Notice is effective on receipt, provided that a copy is mailed by first-class mail on the facsimile transmission date.

Addresses for purpose of giving notice are as follows:

To Metropolitan: **The Metropolitan Water District of Southern California**

Attn.: Chief Executive Officer

Address for U.S. mail:

P.O. Box 54153
Los Angeles, CA 90054-0153

Address for personal or overnight delivery:

700 North Alameda Street
Los Angeles, CA 90012-2944
Telephone: 213-217-6000
Fax: 213-217-6950

With a copy delivered by the same means and at the same addresses to:

The Metropolitan Water District of Southern California

Attn.: General Counsel

To the Department: **The California Department of Fish and Game**

Attn.: Director

Address for U.S. mail: 1416 Ninth Street, 12th Floor
Sacramento, California 95814

Address for personal or overnight delivery:

1416 Ninth Street, 12th Floor
Sacramento, California 95814

With a copy delivered by the same means and at the same addresses to:

The California Department of Fish and Game

Attn.: General Counsel

(a) A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

(b) A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

10.6 Entire Agreement. This Agreement constitutes the final, complete, and exclusive statement of the terms of the Agreement between the Parties pertaining to its subject matter and supersedes all prior and contemporaneous understandings or agreements of the Parties. Neither Party has been induced to enter into this Agreement by, nor is either Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

10.7 Time of the Essence. If the day on which performance of any act or the occurrence of any event hereunder is due is not a business day, the time when such performance or occurrence shall be due shall be the first business day (as defined in Section 4507 of the Administrative Code) occurring after the day on which performance or occurrence would otherwise be due hereunder. All times provided in this Agreement for the performance of any act will be strictly construed, time being of the essence of this Agreement.

10.8 Modification. This Agreement may be supplemented, amended, or modified only by the written agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by both Parties.

10.9 Waiver. No waiver of a breach, failure of condition, or any right or remedy contained in or granted by the provisions of this Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right, or remedy. No waiver of a breach, failure of condition, or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

10.10 Right to Amend the Administrative Code. Notwithstanding anything to the contrary in this Agreement, express or implied, Metropolitan shall have the right to amend the Administrative Code at its sole discretion, except that, for the purposes of this Agreement, no such amendment shall have the effect of changing or modifying this Agreement, unless such effect is first approved by the Director.

10.11 Counterparts. This Agreement may be executed in two or more counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

10.12 Audit. Metropolitan and the Department (as administrator of the Salton Sea Restoration Fund) are responsible for assuring the accuracy of their books and records evidencing the performance of their respective obligations under this Agreement. In connection therewith, Metropolitan will have the right to review the books and records of the Department and of the Salton Sea Restoration Fund relating to this Agreement, and the Department will have the right to review Metropolitan's books and records relating to this Agreement, in each case for purposes of determining compliance with the Agreement. Records evidencing compliance with this Agreement shall be maintained by the Parties during the term of this Agreement, and for a period of three years from the date of its termination.

10.13 Sovereign Immunity. Notwithstanding any other provision of this Agreement, nothing herein is intended to constitute consent by the State of California or any of its departments, agencies, commissions, or boards to suit in any court described in Article III of the United States Constitution. This Agreement shall not waive, or be interpreted as waiving, the

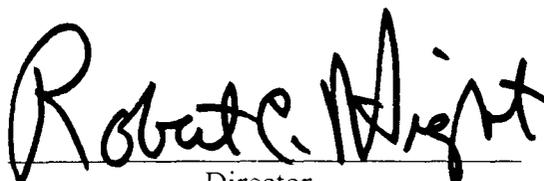
State of California's sovereign immunity under the Eleventh Amendment or any other provision of the United States Constitution in any present or future judicial or administrative proceeding.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

Approved as to Form:

The California Department of Fish and Game

By: _____
General Counsel

By: 
Director

Approved as to Form:

The Metropolitan Water District of Southern California

By: 
General Counsel

By: 
Chief Executive Officer

**AGREEMENT BETWEEN
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
AND THE DEPARTMENT OF WATER RESOURCES
FOR THE TRANSFER OF COLORADO RIVER WATER**

This Agreement is made and entered into between the Metropolitan Water District of Southern California (hereinafter “Metropolitan”) and the California Department of Water Resources (hereinafter the “Department”).

RECITALS

1. Legislation to implement the Colorado River Quantification Settlement Agreement (QSA) and State Salton Sea restoration actions (hereinafter implementing legislation) was enacted in 2003. The implementing legislation comprised SB 277 (Ch. 611, Stats. of 2003), SB 317 (Ch. 612, Stats. of 2003), and SB 654 (Ch. 613, Stats. of 2003). The implementing legislation found that restoration of the Salton Sea was in the State and national interest, and directed that specified State actions be taken to facilitate restoration. Among other things, the implementing legislation directed the Secretary for Resources to undertake a Salton Sea Restoration Study, established a Salton Sea Restoration Fund administered by the Department of Fish and Game (DFG), and called for the Department of Water Resources (Department) to acquire water from Imperial Irrigation District (Imperial) and to use the water or the proceeds from its sale to the Metropolitan Water District of Southern California (Metropolitan) to benefit Salton Sea restoration.

2. SB 317 amended Section 2081.7 of the Fish and Game Code to require that Imperial make available to the Department 800,000 acre-feet (AF) of water obtained through conservation methods selected by Imperial, at a price of \$175/AF annually adjusted for inflation. Imperial is further required to make available, at no cost to the Department, a second increment of up to 800,000 AF of similarly conserved water. The Department is to be responsible for mitigation of environmental impacts relating to use or transfer of the first 800,000 AF increment, and for mitigation of environmental impacts relating to Salton Sea salinity associated with use or transfer of the second 800,000 AF increment.

3. SB 317 further amended Section 2081.7 of the Fish and Game Code to require the Secretary for Resources, as part of undertaking the Salton Sea Restoration Study, to develop a plan for use of the second increment of up to 800,000 AF of conserved water. None of that water may be transferred unless the Secretary finds that transfer is consistent with the preferred alternative for Salton Sea restoration.

4. SB 317 additionally amended Section 2081.7 of the Fish and Game Code to require that Metropolitan purchase the up to 1,600,000 AF of water made available by Imperial to the Department, at a price of not less than \$250/AF annually adjusted for inflation. The Department, after deducting its costs for administering the transaction and performing related environmental compliance actions, is to deposit the proceeds of the transfer into the Salton Sea Restoration Fund administered by DFG. The Salton Sea Restoration Fund was created by SB 277.

5. SB 317 also provided that Metropolitan shall receive credit against future mitigation obligations under the Lower Colorado River Multi-Species Plan (LCRMSCP) for funds used to purchase the transferred water, to the extent that such funds are spent on projects that contribute to conservation of species identified in the LCRMSCP and that are consistent with the preferred alternative identified in the Salton Sea Restoration Plan. Such crediting mechanism is not addressed in this Agreement because the Department is not a party to the LCRMSCP.

6. Other agreements associated with the QSA cover actions by the Secretary of the Interior to manage deliveries of Colorado River water to Imperial and to Metropolitan to carry out QSA-related water transfers, including transfers contemplated in this Agreement. The Department is not a party to those agreements and has no contractual relationship with Interior regarding ordering and delivering Colorado River water.

7. The Department and Imperial are contemporaneously with this Agreement entering into an agreement for the transfer by Imperial of up to 1.6 million acre-feet of Colorado River water to the Department as contemplated by the QSA implementing legislation (hereinafter "Transfer Agreement").

AGREEMENT

Article 1. For the purposes of this agreement:

- (a) “(c)(1) water” refers to the water described in Fish and Game Code Section 2081.7(c)(1) that Imperial transfers to the Department pursuant to the agreement between the Department and Imperial referred to in Recital 2.
- (b) “(c)(2) water” refers to the water described in Fish and Game Code Section 2081.7(c)(2) that Imperial transfers to the Department pursuant to the agreement between the Department and Imperial referred to in Recital 3.

Article 2. This Agreement shall be effective upon execution by the parties and approval of the Agreement by the Department of General Services, but not earlier than the Effective Date as defined in the QSA.

Article 3. The parties’ rights and obligations under this Agreement are subject to and conditional upon compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) and any other environmental and regulatory requirements. The parties recognize and acknowledge that the findings and/or implementation of mitigation obligations pursuant to CEQA/NEPA or other applicable laws to mitigate for environmental impacts of the transfers provided for in this Agreement, including impacts on the Salton Sea, may preclude the Department from engaging in some part or all of the transfers of (c)(1) or (c)(2) water.

Article 3.5. This Agreement shall remain in effect only so long as the Department’s agreement with Imperial, referred to in Recital 7, and the QSA, referred to in Recital 1, remain in effect.

Article 3.6. Within 60 days of the effective date of this Agreement, Metropolitan shall transfer \$100,000 to the Department for the Department to apply to the initial costs of administering this Agreement, including environmental compliance costs. Metropolitan shall, upon request of the Department, provide to the Department such additional funds as may be necessary to cover the initial costs of administration. These advances, which shall not exceed \$500,000 in the aggregate without Metropolitan's prior written consent, shall be credited against Metropolitan's obligations under Articles 4(b), 6, 7(b) and 9. The Department and Metropolitan agree that all such costs thereafter will be charged to, deducted from, or credited against the amounts paid by Metropolitan to the Department for water transferred under this Agreement.

Article 4. Metropolitan shall accept the transfer of (c)(1) water from the Department in accordance with Article 8, as made available by Imperial pursuant to the agreement between the Department and Imperial referred to in Recital 7. By December 1 of the year preceding, Metropolitan shall submit to the Department the following:

- a. A proposed schedule upon which Metropolitan desires the water to be made available within the year for which the request is being made.
- b. Payment for the entire annual amount set forth in the schedule established pursuant to Article 8.5. The price shall be \$250 per acre-foot. This price shall be adjusted annually from September 1, 2003, for inflation, in accordance with the changes in the gross domestic product implicit deflator published by the U.S. Bureau of Economic Analysis.

Article 4.5. The Department may not transfer to Metropolitan an annual amount different from the amounts established in accordance with Article 8.5 without Metropolitan's prior written consent.

- Article 5. The Department shall forward the schedule established in accordance with Article 8.5 to Imperial for purpose of Imperial's making the (c)(1) water available in accordance therewith.
- Article 5.5. The Department shall not transfer any (c)(1) water to any person other than Metropolitan, or assign any of its rights under the Transfer Agreement between the Department and Imperial, without the prior written consent of Metropolitan.
- Article 6. The Department shall deposit Metropolitan's payment under Article 4(b) in an interest-bearing account. The use of this account shall be exclusively for purposes of this agreement and for use in paying costs and forwarding funds in the fulfillment of the Department's obligations under the implementing legislation described in Recital 1. If the water requested or any part of it is not in fact available for Metropolitan to divert, the Department shall remit to Metropolitan the portion of Metropolitan's payment that covers the unavailable water, plus the interest accrued on that portion. Beyond returning the appropriate portion of Metropolitan's payment plus interest as provided in this Article, the Department shall have no further responsibility to Metropolitan for water not made available under this Agreement, provided that the Department is and continues to be in compliance with this Agreement. The remedy described in this Article is the sole and exclusive non-equitable remedy for any and all damages arising out of the Department's failure to make water available.
- Article 6.5. The acquisition by the Department of (c)(1) water, and Metropolitan's obligation to pay for (c)(1) water, are conditional upon the Department's assuming responsibility for any and all environmental processes, environmental impacts including air quality impacts, and mitigation costs, including those related to Salton Sea salinity, related to the transfer of (c)(1) water.
- Article 7. Metropolitan shall accept the transfer of (c)(2) water from the Department in accordance with the schedule established in accordance with Article 8.5, as made available by Imperial pursuant to the agreement between the Department and

Imperial referred to in Recital 7. By December 1 of the year preceding, Metropolitan shall submit to the Department the following:

- a. A proposed schedule upon which Metropolitan desires the water to be made available within the year for which the request is being made.
- b. Payment for the entire annual amount set forth in the schedule established pursuant to Article 8.5. The price shall be \$250 per acre-foot. This price shall be adjusted annually from September 1, 2003, for inflation, in accordance with the changes in the gross domestic product implicit deflator published by the U.S. Bureau of Economic Analysis.
- c. No (c)(2) water shall be available for transfer to Metropolitan unless the Secretary of the Resources Agency of the State of California has first found that such transfer is consistent with the preferred alternative for Salton Sea restoration developed pursuant to Fish and Game Code Section 2081.7(e)(2)(C).
- d. Metropolitan acknowledges that the quantity of (c)(2) water available to it will reflect requirements in the Colorado River Water Delivery Agreement among the Secretary of the Interior, Metropolitan, Imperial, Coachella Valley Water District, and San Diego County Water Authority that part of the (c)(2) water shall be used to meet specified benchmarks for reductions in agricultural use of Colorado River water in the event that Metropolitan is unable to secure a proposed agreement with Palo Verde Irrigation District for transfer of agricultural water to Metropolitan.

Article 8. The Department shall forward each schedule established in accordance with Article 8.5 to Imperial for purpose of Imperial's making the (c)(1) water or the (c)(2) water, as the case may be, available in accordance therewith.

Article 8.5. The Department will transfer to Metropolitan the amounts set forth in a schedule for (c)(1) water and a schedule for (c)(2) water determined by mutual agreement between the Department and Metropolitan. Notwithstanding anything to the contrary in this Agreement, no water will be tendered or transferred to Metropolitan under this Agreement until such schedules are mutually agreed upon. Any such schedule established in accordance with the foregoing shall be subject to change by the Department, if and to the extent the Department has determined that transferring a lesser amount than called for by any such schedule is necessary for environmental protection and compliance purposes, in which event, such schedule shall be modified to reflect such determination.

Article 8.6. The Department shall not transfer any (c)(2) water to any person other than Metropolitan, or assign any of its rights under the Transfer Agreement between the Department and Imperial, without the prior written consent of Metropolitan.

Article 9. The Department shall deposit Metropolitan's payment under Article 7(b) in an interest-bearing account. If the water requested or any part of it is not in fact available for Metropolitan to divert, the Department shall remit to Metropolitan the portion of Metropolitan's payment that covers the unavailable water, plus the interest accrued on that portion. Beyond returning the appropriate portion of Metropolitan's payment plus interest as provided in this Article, the Department shall have no further responsibility to Metropolitan for water not made available under this Agreement, provided that the Department is and continues to be in compliance with this Agreement.

Article 9.5. The acquisition by the Department of (c)(2) water, and Metropolitan's obligation to pay for (c)(2) water, are conditional upon the Department's assuming responsibility for any and all environmental processes, environmental impacts (including air quality impacts), and mitigation costs relating to Salton Sea salinity related to the transfer of (c)(2) water.

Article 10. The quantity of water made available to Metropolitan each year at Imperial Dam and delivered to the Colorado River Aqueduct at Lake Havasu will be determined in the accounting prepared by the U.S. Bureau of Reclamation (USBR) in accordance with Article V of the United States Supreme Court decree in *Arizona v. California* dated March 9, 1964. The Department shall have no responsibility for USBR's accounting of the quantity of water made available to Metropolitan.

Article 10.5. The following contract administration provisions shall apply with regard to the notifications, interest-bearing account deposits and withdrawals, billing, payment, water exchanges, delivery schedules and water availability accounting processes set forth in this Agreement:

a. The parties shall designate contract managers who will be responsible for managing and implementing the processes set forth in such Articles.

Either party may change its designated contract manager at any time by prior written notice to the other party. The initial contract managers are:

For Metropolitan: Chief Executive Officer

For the Department: Director

b. All correspondence, notices and other matters relating to the processes set forth in such Articles shall be directed to the appropriate contract manager designated above.

c. The contract managers will develop and amend from time to time written administrative protocols, subject in each case to the approval of both parties or their delegates, that will aid the parties' administration of this Agreement.

Article 11. The term of this agreement shall be from its effective date to December 31, 2018, but may be extended upon written agreement of the parties.

Article 12. This contract is not assignable.

Article 13. Nothing in this Agreement shall be construed to modify, amend, or otherwise affect in any way any obligations or rights the Department has, or any obligations or rights that Metropolitan has, under the water supply contract between the Department and Metropolitan entered into on November 4, 1960, as amended and as it may be amended.

Article 14. The parties shall exercise reasonable good faith efforts to resolve any dispute that may arise under this agreement, including non-binding mediation.

Article 15. Both parties hereto and their counsel have participated in the drafting of all the provisions of this Agreement.

Article 16. All notices, requests, or demands under this Agreement shall be in writing, and shall be made to:

To Metropolitan: The Metropolitan Water District
of Southern California
Attn.: Chief Executive Officer

Address for mailing: P.O. Box 54153
Los Angeles, CA 90054-0153

Address for delivery: 700 North Alameda Street
Los Angeles, CA 90012-2944
Telephone: 213-217-6000
FAX: 213-217-6950

To the Department: Department of Water Resources
Attn.: Director

Address for mailing: P.O. Box 942836
Sacramento, CA 94236-0001

Address for delivery: 1416 Ninth Street
Sacramento, CA 95814-5515

- Article 16.5. A party may change its address upon written notice to the other party.
- Article 17. This Agreement, including any exhibits attached hereto, constitutes the final, complete, and exclusive statement of the terms of the Agreement between the parties, and supersedes all prior and contemporaneous understandings or agreements of the parties as to the matters contained herein.
- Article 18. This Agreement may be amended only by written agreement of the parties.
- Article 19. No waiver of a breach, failure of condition, or any right or remedy contained or granted by the provisions of this Agreement shall be effective unless made in writing by the waiving party. No waiver of a breach, failure of a condition, or right or remedy shall be construed to be a waiver of any other breach, failure, right or remedy. No waiver shall constitute a continuing waiver unless the writing so specifies.
- Article 20. Neither Metropolitan nor any of its officers, agents, or employees shall be liable for the control, carriage, handling, use, disposal, or distribution of any water subject to this agreement before such water has passed Metropolitan's Colorado River Intake; nor for claim of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water before it has passed Metropolitan's Colorado River Intake.
- Article 21. Notwithstanding anything in this Agreement to the contrary, each party agrees to proceed with reasonable diligence and use commercially reasonable good faith efforts to jointly defend any lawsuit or administrative proceeding by any person (other than Metropolitan or the Department) challenging the legality, validity, or enforceability of this Agreement or any activities contemplated by this Agreement. Metropolitan and the Department shall each bear their own costs of such defense.

Article 22. Notwithstanding any other provision of this agreement, nothing herein is intended to constitute consent by the State of California or any of its departments, agencies, commissions, or boards to suit in any court described in Article III of the U.S. Constitution. This agreement shall not waive, or be interpreted as waiving, the State of California's sovereign immunity under the Eleventh Amendment or any other provision of the U.S. Constitution in any present or future judicial or administrative proceeding.

Article 23. This Agreement may be executed in counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

Article 24. If the performance, in whole or in part, of the obligations of the respective parties under this Agreement is hindered, interrupted, or prevented by wars, strikes, lockouts, fire, acts of God or by other acts of military authority, or by any cause beyond the control of the respective parties hereto, whether similar to the causes herein specified or not, such obligations of the respective parties under this Agreement shall be suspended to the extent and for the time the performance thereof is affected by any such act. Upon the cessation of any such hindrance, interruption, or prevention, both parties shall become obligated to resume and continue performance of their respective obligations under this Agreement. Notwithstanding any act described in this Article, the parties shall diligently undertake all reasonable effort to perform this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA



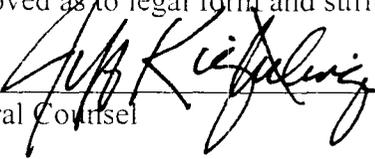
Signature

Date: 10/10/03

CEO

Title

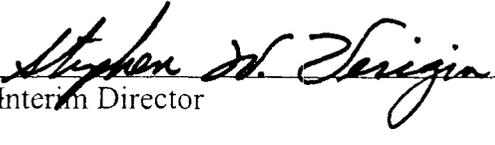
Approved as to legal form and sufficiency:



General Counsel

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

Date: 10/10/03


for _____
Interim Director

**AMENDMENT TO THE APPROVAL AGREEMENT AMONG
THE IMPERIAL IRRIGATION DISTRICT, THE METROPOLITAN WATER
DISTRICT OF SOUTHERN CALIFORNIA, PALO VERDE IRRIGATION DISTRICT
AND COACHELLA VALLEY WATER DISTRICT**

THIS AMENDMENT to the December 19, 1989 Approval Agreement is made and entered into the 10th day of October, 2003, by and between Imperial Irrigation District, a California irrigation district (IID), The Metropolitan Water District of Southern California, a California metropolitan water district (MWD), Palo Verde Irrigation District, a California irrigation district (PVID), and Coachella Valley Water District, a California county water district (CVWD) each of which is at times referred to individually as "Party" and which are at times collectively referred to as "Parties".

RECITALS

RECITALS, A. through E., G., and H. in the Approval Agreement remain in effect; the Recitals are hereby amended by deleting the last sentence and replacing it with a new sentence at the end of Recital F.; and Recital I is added. Recital F. and Recital I., as amended, will read as follows:

"F. IID, MWD, and CVWD recognize that they have differences of opinion over various legal questions. CVWD has filed a complaint entitled Coachella Valley Water District v. Imperial Irrigation District, et al. in the United States District Court for the Southern District of California alleging, among other things, that the Conservation Agreement is unlawful and void. Irrespective of these differences of opinion, each Party wishes to settle the pending litigation and allow the Conservation Agreement, as modified by this Approval Agreement, to be implemented without regard to current or future legal differences and without further proceedings in the pending litigation of the CVWD complaint. In entering into this Approval Agreement, each Party agrees that nothing in this Approval Agreement or in the Conservation Agreement, and no action or failure to act in connection with the adoption or implementation of this Approval Agreement or the Conservation Agreement, is intended to or should have the effect of adding to or subtracting from the legal positions heretofore or hereafter taken by any Party as to all water other than the Conserved Water, as if the Conservation Agreement and this Approval Agreement did not exist. Except for conserved water made available by the construction and implementation of projects set forth herein and in the Conservation Agreement, the Parties' water rights may be exercised in any lawful manner consistent with the Quantification Settlement Agreement among IID, MWD, and CVWD dated as of October 10, 2003 (the "Quantification Settlement Agreement") and the related Acquisition Agreements (as defined therein)."

"I. The Parties desire to amend the Approval Agreement as contemplated by the Quantification Settlement Agreement and the related Acquisition Agreements."

NOW THEREFORE, for and in consideration of amended mutual obligations and undertakings set forth herein, the Parties hereby agree as follows:

1. AMENDMENT TO SECTION 1.1

The portion of the first sentence, on Page 4, of Section 1.1, Article I beginning with “; and (iii)”, through the end of the paragraph is hereby deleted in its entirety. Section 1.1 will read, as amended, as follows:

“Section 1.1: The Parties agree that: (i) nothing in this Approval Agreement or the Conservation Agreement shall change the Seven Party Agreement dated August 18, 1931, which provides the schedule of priorities for use of the waters of the Colorado River within California as published in Section 6 of the General Regulations of the Secretary of the Interior (Secretary) dated September 28, 1931, and incorporated in the United States water delivery contracts with the Parties dated December 1, 1932 (IID), September 28, 1931 (MWD), February 7, 1933 (PVID), and October 15, 1934 (CVWD); and (ii) IID’s, MWD’s, PVID’s, and CVWD’s use of the Conserved Water shall be in accordance with the terms of the Conservation Agreement, as modified by this Approval Agreement.”

2. AMENDMENT TO SECTION 2.1

On Page 6, fifth line, after the word “CVWD” insert “through October 30, 2003. Effective October 31, 2003, the Measurement Committee shall be composed of all members of the Program Coordinating Committee, and one representative from PVID.”

Section 2.1 will read, as amended, as follows:

“Section 2.1: Water Conservation Measurement Committee. It is recognized and agreed that the estimates contained in the Conservation Agreement and this Approval Agreement of the amount of water to be conserved annually by the C&A Programs and the amount to be conserved by each project of the C&A Programs are based on information and data available to IID and MWD at this time, but that the initial and subsequent verification provided in Section 2.2 of this Approval Agreement may result in a determination of a different total amount of water conserved and different amounts conserved by the individual projects of the C&A Programs. In order to provide an orderly basis among the Parties for such verification, there shall be established a Water Conservation Measurement Committee (Measurement Committee) whose duties and responsibilities are limited solely to those specified in Section 2.2 of this Approval Agreement. To the extent the duties and responsibilities of the Measurement Committee with regard to the verification of the quantity of water conserved from the C&A Programs and the process of determining the amount of water conserved are duplicative or in conflict with the duties and responsibilities of the Program Coordinating Committee (as stated in the Conservation Agreement), the duties and responsibilities of the Measurement Committee with regard to the verification of the quantity of water conserved from the C&A Programs and the process of determining the amount of water

conserved as set forth in this Approval Agreement shall govern. The Measurement Committee shall be composed of all members of the Program Coordinating Committee, and one representative each from PVID and CVWD through October 30, 2003. Effective October 31, 2003, the Measurement Committee shall be composed of all members of the Program Coordinating Committee, and one representative from PVID. The chairman of the Program Coordinating Committee shall also serve as the chairman of the Measurement Committee. The members of the Program Coordinating Committee shall be registered as professional engineers, including civil, agricultural, or other appropriate fields of engineering, and the chairman thereof shall be independent and have no past, present, or pending relationship with the Parties, unless IID and MWD expressly consent thereto. Payment of the expenses of the Program Coordinating Committee members shall be governed by the provisions of the Conservation Agreement. Payment of the expenses of the other members of the Measurement Committee shall be borne by the Party they represent. Each member of the Measurement Committee shall have technical competence in the design, construction, or operation of major water supply facilities. PVID's and CVWD's members of the Measurement Committee shall be designated within 30 days after the effective date of the Conservation Agreement and may be replaced at the pleasure of their appointing agency. Following initial selection of the members, all changes in the membership shall be made promptly and in such fashion that it will not interfere with the duties and responsibilities of the Measurement Committee. By unanimous written agreement among all the Parties, the duties and responsibilities of the Measurement Committee may be modified. The chairman of the Measurement Committee shall schedule meetings of the Measurement Committee upon request of any member of the Measurement Committee and shall provide each member of the Measurement Committee 15 days' notice of the time, place, and subject of the meeting. All decisions of the Measurement Committee shall be by a unanimous vote, recorded in writing, and consistent with the terms of this Approval Agreement. In the event that all Measurement Committee members are not present, a letter with the proposed action shall be sent to the absent member(s) by registered or certified mail, postage prepaid, return receipt requested. If no written protest from the absent member(s) is received by the Measurement Committee chairman within 30 days of the date of the receipt of the Measurement Committee letter, the decision shall be deemed unanimous and shall become final. Should the Measurement Committee not reach a decision by unanimous vote on any matter, that matter shall be resolved under Section 2.3 of this Approval Agreement. Notwithstanding the foregoing sentence, modification of the duties and responsibilities of the Measurement Committee may only be made by unanimous agreement among the Parties, and are not subject to change by Section 2.3 of this Approval Agreement."

3. AMENDMENT TO SECTION 2.2

On Page 9, tenth line of the partial paragraph, after the word "Agreement" insert "." and in the eleventh line delete the words "except as provided in Article III of this Approval Agreement."

On Page 10, twenty-fifth line of the partial paragraph, after the word "other", insert the phrase "force majeure type".

On Page 12, fourth line of the partial paragraph, after the word "implementation" insert the phrase "but will not decline."

Section 2.2 will read, as amended, as follows:

"Section 2.2. Duties and Responsibilities of the Measurement Committee.

Within one year after the effective date of the Conservation Agreement, the Measurement Committee shall designate one or more consultants with recognized competence in water conservation and measurement activities. IID shall retain the consultant(s) on behalf of the Measurement Committee. Payment of the expenses of the consultant(s) shall be paid as a capital or annual direct cost by MWD under the Conservation Agreement. The consultant(s) shall serve at the pleasure of the Measurement Committee. During the construction period of the C&A Programs, the consultant(s) will be available to IID to advise IID of the measuring devices and techniques that should be used for the measurement of water conserved from the C&A Programs, and within six months after the appointment of the consultant(s), the consultant(s) shall recommend to the Measurement Committee the measures to be undertaken and facilities to be installed for verification of amounts of water conserved by the C&A Programs. To the extent such measures and facilities are approved by the Measurement Committee, IID shall implement the measures and construct the facilities in a timely manner to permit an accurate determination, by the end of calendar year 1994, of the quantity of water conserved from each project of the C&A Programs. Such measures and facilities for the verification of amounts of water conserved, and all related expenses, shall be paid by MWD in accordance with the provisions of the Conservation Agreement. Within 18 months from the effective date of the Conservation Agreement, the consultant(s) shall prepare a report(s) on the amount of water estimated to be conserved by the C&A Programs and each project thereof, and shall submit the report(s) to the Measurement Committee. Based on such report(s), the Measurement Committee shall make an estimate of the quantity of water to be conserved by the C&A Programs and each project thereof. Until actual data is available by the end of calendar year 1994 to verify or modify such estimate of water conserved, such estimate shall be used as the amount of the reduction of diversions by IID, and to thus determine the amount of Conserved Water which shall be available for use by MWD pursuant to the Conservation Agreement as augmented and modified by this Approval Agreement. Prior to the determination of the estimate by the Measurement Committee, the amounts shown in Section 3.2 and Appendices A and D of the Conservation Agreement and Exhibit A of this Approval Agreement shall govern. In order to assist in making an accurate determination of the quantity of water conserved from the C&A Programs by the end of calendar year 1994, and provide information to IID to assist it in making any modification or substitution of projects pursuant to Section 4.1 of this Approval Agreement, for each calendar year prior to calendar year 1994 the Measurement Committee shall endeavor to estimate the anticipated quantity of water to be conserved by the C&A Programs upon full implementation of projects, including any modifications or substitutions of projects made

pursuant to the Conservation Agreement and this Approval Agreement. Commencing in calendar year 1994, and in each of the four successive years after 1994, the consultant(s) shall review the then available information and data and make a recommendation to the Measurement Committee on the amounts of water conserved by each individual project and by the C&A Programs. Said determined amount shall, prospectively, constitute the amount of the reduced diversions by IID and the amount of Conserved Water which shall thus be available for use by MWD under the Conservation Agreement as augmented and modified by this Approval Agreement, subject to the limitations on MWD's use contained in the Conservation Agreement and this Approval Agreement. Following these initial five annual reviews, such reviews and reports to the Measurement Committee shall be made by the consultant(s) at five-year intervals for the balance of the term of the Conservation Agreement and at any other times or time requested by a member of the Measurement Committee; provided however, such reviews and reports shall not be made more frequently than once a year. The Measurement Committee shall have the right to decrease, or increase, the amount of water deemed to be conserved from a project of the C&A Programs in the event that an earthquake, binding administrative decision or court order, or other force majeure type events cause the project to function differently than intended, designed, constructed or implemented. The Parties hereto mutually acknowledge that the C&A Programs are intended to conserve 106,110 acre-feet of water annually. In the event a determination is made by the Measurement Committee, or otherwise established pursuant to Section 2.3 of this Approval Agreement, that the total amount of water conserved from the C&A Programs is more than 106,110 acre-feet annually, the additional water, pursuant to the Conservation Agreement and as supplemented by this Approval Agreement, shall be available for MWD's use, subject to the limitations on MWD's use contained in the Conservation Agreement and this Approval Agreement. In the event a determination is made by the Measurement Committee, or otherwise established pursuant to Section 2.3 of this Approval Agreement, that the total amount of water conserved by the Conservation Program is less than 100,000 acre-feet annually, then IID shall proceed, but only at the expense of MWD, to implement additional conservation measures to the Conservation Program in accordance with the terms of the Conservation Agreement. However, in the absence of written approval from MWD to proceed with such additional conservation measures, IID shall not be obligated to construct or implement the additional conservation measures. The water conserved by such additional measures shall be subject to the provisions of the Conservation Agreement and this Approval Agreement. As more specifically set forth in Article IV of this Approval Agreement, within the constraints therein specified, IID has the necessary latitude and flexibility to modify or substitute projects such that the amount of water conserved by the Conservation Program will be between 100,000 and 110,000 acre-feet annually upon full implementation but will not decline."

4. AMENDMENT TO SECTION 3.1

Section 3.1 is replaced with a new Section 3.1 which, as amended, will read as follows:

"Section 3.1: Conditions for Reduction in MWD's Use of Conserved Water. In any calendar year following the Effective Date of the Quantification Settlement

Agreement, MWD will reduce its use of Conserved Water in accordance with the provisions of Section 3.2 of this Approval Agreement, subject to the following condition: CVWD requests MWD, in accordance with this Article III, to reduce its use of Conserved Water.”

5. AMENDMENT TO SECTION 3.2

Section 3.2 is replaced with a new Section 3.2 which, as amended, will read as follows:

“Section 3.2: Reduction in MWD’s Use of Conserved Water. If MWD is required to reduce its use of Conserved Water because the conditions enumerated in Section 3.1 of this Approval Agreement have occurred, MWD will reduce its use of Conserved Water by the amount requested by CVWD, but no more than a maximum of 20,000 acre-feet per calendar year. MWD shall not be relieved of any payment obligations under the Conservation Agreement as modified by this Approval Agreement as a result of a reduction in its use of Conserved Water pursuant to this Section.”

6. AMENDMENT TO SECTION 4.1

On Page 22, the paragraph beginning with the words “(ii) In addition to the....” is deleted in its entirety.

Section 4.1, as amended, will read as follows:

“Section 4.1: In consideration of the mutual obligations and undertakings set forth herein including settlement of the pending litigation:

(i) IID will delete Project Number 1 (Trifolium Reservoir), Project Number 2 (South Alamo Canal Lining, Phase I), and Project Number 13 (Tailwater Assessment) from the Appendices of the Conservation Agreement and substitute in their place the projects listed on Exhibit A attached hereto. Furthermore, IID shall reduce its annual diversions from the Colorado River below that which it would otherwise have been absent Project Number 1 and Project Number 2 (in an amount equal to the quantity of water conserved by these two projects, defined as the Augmentation Program, and estimated to be 6,110 acre-feet annually) so that the water from the Augmentation Program shall be available for MWD’s use, subject to the limitations on MWD’s use contained in the Conservation Agreement and this Approval Agreement. The amount of water conserved by these two projects will be determined by the Measurement Committee in accordance with Section 2.2 of this Approval Agreement. If the estimate is less than the Measurement Committee determines has been conserved, the additional water shall be available for use by MWD under the Conservation Agreement and this Approval Agreement, subject to the limitations on MWD’s use contained in the Conservation Agreement and this Approval Agreement. If the estimate is more than the Measurement Committee establishes, there shall be no obligation on the part of IID, either at its own expense or at the expense of MWD, to provide the additional water. IID shall construct, operate, maintain, and replace such projects in the same manner as it

would have constructed, operated, maintained, and replaced these projects had the projects remained an integral part of the Conservation Program and been paid for by MWD, and recognizing that 6,110 acre-feet annually was estimated to be conserved by the projects. IID shall pay the capital and annual direct costs of Project Number 1 and Project Number 2. Except for the provisions relating to the payment by MWD of the capital and annual direct costs for Projects 1 and 2, all other provisions set forth in the Conservation Agreement and this Approval Agreement shall be applicable to, and be binding upon, MWD and IID with respect to the use of water conserved by these two projects. All terms and conditions of the Conservation Agreement relating to Project Number 13 (Tailwater Assessment) shall be deleted, and such terms and conditions shall be applied to the substituted projects set forth in Exhibit A.”

7. AMENDMENT TO SECTION 7.1

Section 7.1 will be deleted in its entirety.

8. AMENDMENT TO SECTION 8.1

Section 8.1 will be deleted in its entirety and replaced with a new Section 8.1 which, as amended, will read as follows:

“The Parties do not intend to, and under the Agreement do not in any way, transfer, assign, encumber or grant to each other any ownership interest in or control over any of each other’s water rights, nor do they intend in any way to define, modify or agree on the proper use, purposes, or limits of each other’s water rights.”

9. AMENDMENT TO SECTION 9.1

Section 9.1 will be deleted in its entirety and replaced with a new Section 9.1 which, as amended, will read as follows:

“Section 9.1: Subject to the terms and conditions of this Approval Agreement, PVID agrees not to divert, pump, use or demand the Conserved Water (as defined in Recital E). This PVID expressly agrees to do in order to permit such water to be made available to MWD in accordance with the Parties’ water delivery contracts with the United States.

“Subject to the terms and conditions of this Approval Agreement and except as provided herein, CVWD agrees not to divert, pump, use or demand the Conserved Water (as defined in Recital E). This CVWD expressly agrees to do in order to permit such water to be made available to MWD in accordance with the Parties’ water delivery contracts with the United States.”

10. AMENDMENT TO SECTION 11.1

Section 11.1, Page 26, second line after the phrase “Approval Agreement”, insert “as amended”, and after the phrase “Conservation Agreement”, insert “as amended”.

Section 11.1, Page 27, third line after the phrase “Approval Agreement”, insert “as amended”.

Section 11.1, Page 27, fifth line after the phrase “Conservation Agreement”, insert “as amended” and after the phrase “Approval Agreement”, insert “as amended”.

Section 11.1, as amended, will read as follows:

“Section 11.1: Except as expressly provided for in this Approval Agreement as amended, the Conservation Agreement as amended shall govern the relationship between IID and MWD. With regard to the relationship among IID, MWD, CVWD, and PVID, to the extent the terms and conditions of this Approval Agreement as amended conflict with, modify or alter the terms and conditions contained in the Conservation Agreement as amended, this Approval Agreement as amended shall govern.

11. AMENDMENT TO EXHIBITS B AND C

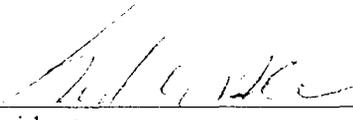
Exhibits B and C are deleted in their entirety.

12. AGREEMENT TO GOVERN. This Amendment shall be interpreted in a manner consistent with, and in furtherance of the objectives of, the Quantification Settlement Agreement and the related Acquisition Agreements. Except as expressly amended by this Amendment to the Approval Agreement, the Approval Agreement’s mutual obligations and undertakings shall remain in full force and effect.

13. THE AMENDMENTS CONTEMPLATED BY THIS AMENDMENT TO THE APPROVAL AGREEMENT will take effect upon the Effective Date as defined in the Quantification Settlement Agreement.

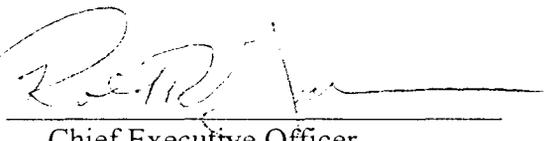
14. TERMINATION. The amendments made by this Amendment to the Approval Agreement will terminate and be of no force or effect upon the termination of the Quantification Settlement Agreement.

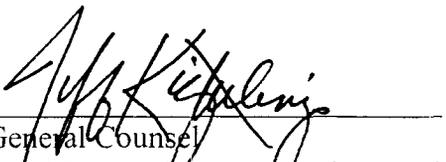
IN WITNESS WHEREOF, the Parties hereto have executed this Amendment to the Approval Agreement on the day and year first above written.

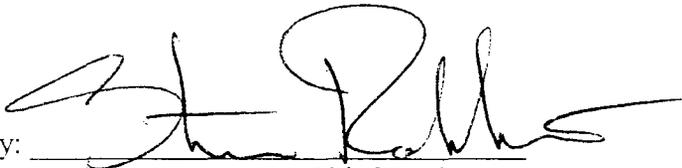
By: 
President
Imperial Irrigation District

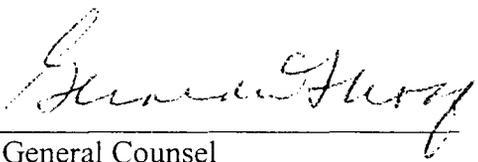
APPROVED AS TO FORM:

By: 
Chief Counsel
Imperial Irrigation District

By: 
Chief Executive Officer
The Metropolitan Water District of
Southern California

By: 
General Counsel
The Metropolitan Water District of
Southern California

By: 
General Manager-Chief Engineer
Coachella Valley Water District

By: 
General Counsel
Coachella Valley Water District

By: _____
President
Palo Verde Irrigation District

By: _____
General Counsel
Palo Verde Irrigation District

**AMENDMENT TO THE AGREEMENT FOR
THE IMPLEMENTATION OF A WATER CONSERVATION PROGRAM AND USE OF
CONSERVED WATER BETWEEN THE IMPERIAL IRRIGATION DISTRICT AND
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

THIS AMENDMENT to the December 22, 1988 Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water is made and entered into the 10th day of October, 2003, by and between Imperial Irrigation District, a California irrigation district (IID) and The Metropolitan Water District of Southern California, a California metropolitan water district (MWD), each of which is at times referred to individually as "Party" and which are at times collectively referred to as "Parties."

RECITALS

RECITALS, A. through G. in the Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water (Agreement) remain in effect and the Recitals are hereby amended with the addition of Recital H. as follows:

"H. The Parties desire to amend the Agreement as contemplated by the Quantification Settlement Agreement among IID, MWD, and Coachella Valley Water District, dated as of October 10, 2003 (the "Quantification Settlement Agreement") and the related Acquisition Agreements, as defined therein.

NOW THEREFORE, for and in consideration of amended mutual obligations and undertakings set forth herein, the Parties hereby agree as follows:

1. **AMENDMENT TO SECTION 1.3**

Add the following sentence to the end of Section 1.3 on Page 7:

"IID has no rights under this Section to substitute projects that would cause a reduction in the volume of Conserved Water made available to MWD to 100,000 AF per year."

Section 1.3, as amended, will read as follows:

"Section 1.3 Modification and Substitution of Projects. It is recognized and agreed that subject to further investigation, IID may find it desirable to modify projects set forth in Appendix A or substitute other projects therefor. Such modification or substitution may be undertaken by IID provided that the cost of a modified or substituted project would not exceed the estimated total cost, including the capital equivalent of the annual direct costs, in 1988 dollars, of the original project, delay the availability of the respective estimated conserved water, or reduce the respective estimated amount of water

conserved, all as determined by the Program Coordinating Committee using standard established engineering procedures and economic practices and the respective estimates set forth in Appendices A, B, C, and D. In the event the feasibility-level estimate of capital costs in 1988 dollars for the total Program exceeds the estimate set forth in Appendix B, then IID shall:

(a) substitute projects as necessary such that the sum of the feasibility-level estimate of capital costs and the capital equivalent of the annual direct costs for the total Program, both in 1988 dollars, does not exceed the sum of the estimate of capital costs in Appendix B and the capital equivalent of the annual direct costs in Appendix C, and the conserved water is not reduced below or delayed beyond the estimates set forth in Appendix A and Appendix D, all as determined by the Program Coordinating Committee; or

(b) obtain written approval from MWD to proceed with the total Program at a higher capital cost estimate.

IID has no rights under this Section to substitute projects in order to cause a reduction in the volume of Conserved Water made available to MWD to 100,000 AF per year.”

2. AMENDMENT TO SECTION 4.2

On Page 25, twenty-third line of the first partial paragraph, after the word “day.” insert “If IID identifies additional costs above the approved and funded budget for any calendar year after the end of such calendar year, IID shall submit, within one year of the end of such calendar year, a revised budget and funding call as set forth above.”

On Page 26, last line of the first partial paragraph, after the word “exhausted.” insert “IID shall be permitted to include in a funding call, as set forth above, any actual unpaid Program costs incurred since October 1, 1998, provided such actual unpaid costs are presented to the Program Coordinating Committee, for approval, by June 30, 2004. The Program Coordinating Committee shall review and approve any actual unpaid Program costs and incorporate such costs into the next funding call to be submitted to MWD for payment pursuant to the revised budget funding calls set forth above.”

Section 4.2, as amended, will read as follows:

“Section 4.2. Funding Call. Within 60 days after the effective date of this Agreement, MWD will provide to IID the amount of \$18,342,602 representing the estimated capital and annual direct costs for the first year of Program implementation. Thereafter, during the first week of January of each year of this Agreement, IID shall issue a funding call to MWD for the approved amounts in the budget. MWD shall pay the amounts of the funding call so that funds are received by IID no later than the 15th day of January if such day falls on a Saturday, Sunday or a legal holiday, the next succeeding business day (the “due day”). If the amounts paid by MWD pursuant to a January funding call, together with interest earned on the funds pursuant to Section 4.3, are insufficient to cover the costs for the calendar year, IID shall submit a revised budget

to the Program Coordinating Committee for the balance of the year. Within fifteen days thereafter, the Program Coordinating Committee shall review the budget items with respect to conformance with documentation provided under Sections 1.5 and 1.8 and approve the budget or suggest any modification thereto after discussion with IID. Immediately following such approval and/or modification, IID shall issue a funding call to MWD for the approved amounts and MWD shall pay the amounts of said funding call so that funds are received by IID within 10 days after issuance of the funding call. If the 10th day falls on a Saturday, Sunday or a legal holiday, the "due day" shall be the next succeeding business day. If IID identifies additional costs above the approved and funded budget for any calendar year after the end of such calendar year, IID shall submit, within one year of the end of such calendar year, a revised budget and funding call as set forth above. If the amounts paid by MWD pursuant to all funding calls during the year, together with interest earned on the funds pursuant to Section 4.3, are in excess of the actual capital costs and annual direct costs of the Program for that year, IID shall credit such excess against the first funding call occurring one year from the year for which such actual costs were determined. To the extent such excess exceeds such first funding call, the amount of the remaining excess shall be credited to the successive funding calls until exhausted. IID shall be permitted to include in a funding call, as set forth above, any actual unpaid Program costs incurred since October 1, 1998, provided such actual unpaid costs are presented to the Program Coordinating Committee, for approval, by June 30, 2004. The Program Coordinating Committee shall review and approve any actual unpaid Program costs and incorporate such costs into the next funding call to be submitted to MWD for payment pursuant to the revised budget funding calls set forth above."

3. AMENDMENT TO SECTION 4.5

On Page 27, eleventh line of the first full paragraph after the word "Agreement," delete "Within two years following the construction and initial implementation of all projects of the Program," and insert "By June 30, 2004,".

On Page 27, last line of the first full paragraph, after the phrase "end of" delete "the minimum term provided in Article VII" and insert "through September 30, 2034,".

On Page 28, fifth and ninth lines of the first partial paragraph, delete "July" and insert "September".

Section 4.5 will read, as amended, as follows:

"Section 4.5. Reduction in Cost. To the extent the total cost, including annual direct costs, in 1988 dollars of the total Program is reduced below the estimates set forth in Appendix B and Appendix C, and providing the availability of the respective conserved water is not reduced below or delayed beyond the estimates set forth in Appendix A and Appendix D, all as determined by the Program Coordinating Committee, then MWD shall pay 25% of such total cost savings to IID for deposit in and disbursement from the indirect cost account established and governed by the provisions of Section 4.4 of this Agreement. By June 30, 2004, the determination of such cost

savings shall be made by the Program Coordinating Committee using standard established engineering procedures and economic practices and an 8% discount factor to convert the annual direct costs to a capital equivalent. Actual capital costs and forecasted annual direct costs, based on the preceding history of operation, through September 30, 2034, shall be used by the Program Coordinating Committee in making such determination. To the extent such 25% cost savings is less than \$5,000,000, then MWD shall forward such 25% cost savings to IID by the September 1 following the determination of the cost savings by the Program Coordinating Committee. To the extent such 25% cost savings is greater than \$5,000,000, then MWD shall forward such 25% cost savings to IID in annual \$5,000,000 increments commencing with the September 1 following the determination of the cost savings by the Program Coordinating Committee, with the last such increment to be the balance owing.”

4. AMENDMENT TO SECTION 6.1

On Page 31, fifth line of the third paragraph, after the word “herein” delete the remainder of the sentence and insert “IID’s water rights may be exercised in any lawful manner consistent with the Quantification Settlement Agreement and the IID/MWD Acquisition Agreement (as defined in the Quantification Settlement Agreement)”.

On Page 31, delete the last sentence of the third paragraph.

Section 6.1 will read, as amended, as follows:

“Section 6.1 Rights to Conserved Water. Both parties to this Agreement recognize that conservation measures undertaken by IID with funds received from MWD will result in conserved water. Except for conserved water made available by the construction and implementation of projects set forth herein, IID’s water rights may be exercised in any lawful manner consistent with the Quantification Settlement Agreement and the IID/MWD Acquisition Agreement (as defined in the Quantification Settlement Agreement).”

5. AMENDMENT TO SECTION 7.1

On Page 35, second line of the second full paragraph after the word “through” delete “December 31 of the year 35 years after the completion of construction of the last project of the Program or initial operation of that project, whichever is later, (i.e., December 31, 2028, based on completion of construction and initial operation of the last project of the Program during 1993 as set forth in the schedule contained in Appendix D)” and insert “December 31, 2041, or 270 days beyond the termination of the Quantification Settlement Agreement, whichever is later,”.

Section 7.1 will read as amended as follows:

“TERM AND TERMINATION

Section 7.1. Term. The Agreement shall extend through December 31, 2041, or 270 days beyond the termination of the Quantification Settlement Agreement, whichever is later, plus any extension pursuant to Section 3.5, and shall continue thereafter until terminated as specified in Section 7.2 or in Article V of this Agreement.”

6. AMENDMENT TO SECTION 7.2(a)

On Page 36, first line of the first full paragraph, after the word “entirety,” insert “on December 31, 2041 or 270 days after termination of the Quantification Settlement Agreement, whichever is later,”.

On Page 36, third line of the first full paragraph, after the number “1” delete “of the year following the 20th year after completion of construction and initial operation of the last project of the Program” and insert “, 2027”.

On Page 36, fifth line of the first full paragraph, after the word “Program.” delete “If IID gives notice to terminate as provided herein, MWD shall not be required to make the payments as provided under Article IV during the last seven years of the 15-year notice period provided herein.”

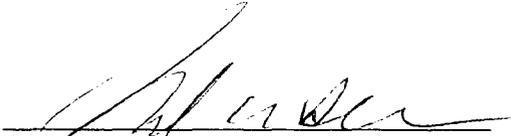
Section 7.2(a) will read as amended as follows:

“(a) IID may terminate this Agreement in its entirety on December 31, 2041 or 270 days after termination of the Quantification Settlement Agreement, whichever is later, by giving MWD 15 years’ written notice of termination on or after January 1, 2027.”

7. **AGREEMENT TO GOVERN.** This Amendment shall be interpreted in a manner consistent with, and in furtherance of the objectives of, the Quantification Settlement Agreement and the related Acquisition Agreements. Except as expressly amended by this Amendment to the Agreement, the Agreement’s mutual obligations and undertakings shall remain in full force and effect.
8. **THE AMENDMENTS CONTEMPLATED BY THIS AMENDMENT TO THE AGREEMENT,** will take effect upon the Effective Date as defined in the Quantification Settlement Agreement.

9. TERMINATION. Except for the amendment to Sections 7.1 and 7.2(a), provided in Sections 5 and 6 herein, the amendments made by this Amendment to the Agreement will terminate and be of no force or effect upon the termination of the Quantification Settlement Agreement.

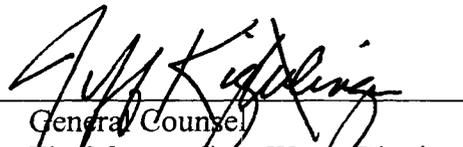
IN WITNESS WHEREOF, the Parties hereto have executed this Amendment to the Agreement on the day and year first above written.

By: 
President
Imperial Irrigation District

APPROVED AS TO FORM:

By: 
Chief Counsel
Imperial Irrigation District

By: 
Chief Executive Officer
The Metropolitan Water District of
Southern California

By: 
General Counsel
The Metropolitan Water District of
Southern California

**AGREEMENT RELATING TO SUPPLEMENTAL WATER
AMONG
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA,
THE SAN LUIS REY SETTLEMENT PARTIES, AND
THE UNITED STATES**

This Agreement is entered into as of the 10th day of October, 2003, among The Metropolitan Water District of Southern California, a metropolitan water district organized and incorporated under the Metropolitan Water District Act of the State of California (Stats. 1969, Chapter 209, as amended), hereinafter referred to as "Metropolitan;" the United States of America acting by and through its Secretary of the Interior ("Secretary"), hereinafter referred to as "United States;" the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, acting through the governing bodies of each respective Band as duly recognized by the Secretary, hereinafter referred to as "Indian Bands;" the San Luis Rey River Indian Water Authority, a permanent intertribal entity established pursuant to duly adopted ordinances of the Indian Bands recognized and approved by Public Law 100-675, hereinafter referred to as "Indian Water Authority;" the City of Escondido, a city organized under the provisions of the general laws of the State of California, hereinafter referred to as "Escondido;" and the Vista Irrigation District, an irrigation district organized and incorporated under the irrigation district law of the State of California (California Water Code, Division 11), hereinafter referred to as "Vista." Each of the above is sometimes referred to individually as "Party," and all of the above are sometimes collectively referred to as "Parties."

DEFINITIONS

1. "All American Canal Lining Project" means that portion of the works authorized in Title II of Public Law 100-675 which will result in a lined All American Canal from one mile west of Pilot Knob to Drop 3 – a distance of approximately 23 miles.
2. "Allocation Agreement" means the agreement entered into by the Secretary and others to allocate the water conserved from the All American Canal Lining Project and the Coachella Canal Lining Project.
3. "Average Cost of Supplemental Capacity" means the average daily cost, expressed monthly as \$/kilowatt-month, that Metropolitan incurs to procure Supplemental Capacity.
4. "Average Cost of Supplemental Energy" means the average daily cost, expressed monthly as \$/megawatt-hour (\$/MWh), that Metropolitan incurs to procure Supplemental Energy.

AGREEMENT RELATING TO SUPPLEMENTAL WATER

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5. "Average Unit Cost of Supplemental Power" means the sum of the Average Cost of Supplemental Energy multiplied by the amount of Supplemental Energy and the Average Cost of Supplemental Capacity multiplied by the amount of Supplemental Capacity, expressed in dollars, divided by the total amount of Supplemental Energy procured for that month. It is calculated monthly and expressed as \$/MWh.
6. "Coachella Canal Lining Project" means that portion of the works authorized in Title II of Public Law 100-675 which will result in a lined Coachella Branch of the All American Canal from Siphons 7 to 32 – a distance of approximately 34.6 miles.
7. "CVWD" means the Coachella Valley Water District.
8. "Escondido" means the City of Escondido; a city organized under the provisions of the general laws of the State of California.
9. "Gene Tie" means the 230 kilovolt (kV) transmission point of interchange near Metropolitan's Colorado River Aqueduct Gene Pumping Plant where power is delivered and accounted for by Western Area Power Administration for Metropolitan, as provided for in Metropolitan's Contract No. Ilr-712 with the United States Bureau of Reclamation.
10. "IID" means the Imperial Irrigation District.
11. "Indian Bands" means the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, acting through the governing bodies of each respective Band as duly recognized by the Secretary.
12. "Indian Water Authority" means the San Luis Rey River Indian Water Authority, a permanent intertribal entity pursuant to duly adopted ordinances recognized and approved by Public Law 100-675.
13. "Local Entities" means the City of Escondido, California and the Vista Irrigation District.
14. "Metropolitan" means The Metropolitan Water District of Southern California, a metropolitan water district organized and incorporated under the Metropolitan Water District Act of the State of California (Stats. 1969, Chapter 209, as amended).
15. "Metropolitan's Treatment Charges" means the average amount charged by Metropolitan to its member public agencies for water treatment.
16. "Packard Amendment" means Section 211 of Public Law 106-377 Appendix B, 114 Stat.1441A-70.

AGREEMENT RELATING TO SUPPLEMENTAL WATER

October 10, 2003

Page 3

17. "Reservations" means the reservations of the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians located in San Diego County, California.

18. "Secretary" means the Secretary of the Interior of the United States of America.

19. "Settlement Act" means Title I of Public Law 100-675, enacted on November 17, 1988, 102 Stat. 4000, Title I (as amended by Section 117 of the Act of November 13, 1991, Public Law 102-154, 105 Stat. 990, 1012-1013; section 1017 of the Act of October 14, 1998, Public Law 105-256, 112 Stat. 1896, 1899; and Section 211 of the Act of October 27, 2000, 106 Public Law 377 Appendix B, 114 Stat. 1441A-70) and known more fully as the "San Luis Rey Indian Water Rights Settlement Act."

20. "Settlement Agreement" means the agreement referred to in Section 104 of the Settlement Act among the United States, Escondido, Vista, and the Indian Bands providing for the complete resolution of all claims, controversies, and issues involved in all of the pending proceedings in the United States District Court for the Southern District of California and before the Federal Energy Regulatory Commission.

21. "Settlement Parties" means the Indian Water Authority, the Indian Bands, and the Local Entities.

22. "Supplemental Capacity" means the wholesale capacity, ancillary services, and other associated capacity services that Metropolitan obtains to meet the Colorado River Aqueduct water supply electric loads not met by (i) Contract No. DE-MS65-86WP39583 (Hoover) or its successor, (ii) Contract No. Ilr-712 (Parker) or its successor, or (iii) the District-Edison 1987 Service and Interchange Agreement.

23. "Supplemental Energy" means the wholesale energy, ancillary services, and other associated energy services that Metropolitan obtains to meet the Colorado River Aqueduct water supply electric loads not met by (i) Contract No. DE-MS65-86WP39583 (Hoover) or its successor, (ii) Contract No. Ilr-712 (Parker) or its successor, or (iii) the District-Edison 1987 Service and Interchange Agreement.

24. "Supplemental Water" for the period of time before the requirements of Section 104 of the Settlement Act have been satisfied means water available to MWD under the Allocation Agreement in an amount up to 16,000 acre-feet per year which would have been available to the Settlement Parties had the requirements of Section 104 of the Settlement Act been satisfied. "Supplemental Water" after the requirements of Section 104 of the Settlement Act have been satisfied means water available for the benefit of the Settlement Parties under the Allocation Agreement.

25. "United States" means the United States of America acting by and through its Secretary of the Interior.

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26. "Vista" means the Vista Irrigation District, an irrigation district organized and incorporated under the irrigation district law of the State of California (California Water Code, Division 11).

27. "Year" means calendar year.

28. "Yuma Area Contractors" means the Yuma Arizona Area Aggregate Power Managers as identified in Bureau of Reclamation Contracts numbered 6-CU-30-P1136 and 6-CU-30-P1137. As of the execution of this Agreement, the Yuma Area Contractors are comprised of the Yuma County Water Users' Association and the Wellton-Mohawk Irrigation and Drainage District.

EXPLANATORY RECITALS

- A. WHEREAS, the water in the San Luis Rey River, located in San Diego County, California, is insufficient to supply the needs of the Indian Bands and the Local Entities;
- B. WHEREAS, litigation involving the United States, the Indian Bands, and the Local Entities was commenced in Federal District Court to determine the rights of the Indian Bands and the Local Entities to the water of the San Luis Rey River, and a related contested proceeding was commenced among the same parties before the Federal Energy Regulatory Commission;
- C. WHEREAS, Metropolitan is not a party to the pending litigation or the related proceeding before the Federal Energy Regulatory Commission;
- D. WHEREAS, pursuant to Title I of Public Law 100-675, enacted on November 17, 1988, the Congress of the United States passed the San Luis Rey Indian Water Rights Settlement Act to provide for the settlement of the disputes that were the subject of the above-referenced litigation and related proceeding;
- E. WHEREAS, pursuant to the Settlement Act, the United States was authorized to arrange for a supplemental water supply for the Settlement Parties of not more than 16,000 acre-feet per year from the following sources: (1) supplemental water which is developed from public lands within the State of California outside the service area of the Central Valley Project, (2) water conserved through projects to line portions of the All-American Canal and its Coachella Branch, authorized in Title II of said Public Law 100-675, and (3) water obtained through a contract with Metropolitan;
- F. WHEREAS, in a letter agreement dated October 10, 2000, a copy of which is attached hereto as Exhibit A, the Yuma Area Contractors and the Settlement Parties agreed that the Yuma Area Contractors would provide power in an

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amount which would not exceed seven (7) megawatts (MW) of capacity and 32,000 megawatt-hours (MWh) of energy annually, contingent upon enactment of a specified amendment (which later became the Packard Amendment) to the Settlement Act;

- G. WHEREAS, on October 27, 2000, Section 211 of Public Law 106-377 – Appendix B (the “Packard Amendment”) amended the San Luis Rey Indian Water Rights Settlement Act by adding subsection 106(f), which directed the Secretary, in order to fulfill the trust responsibility to the Bands, acting through the Commissioner of Reclamation, to furnish annually to the San Luis Rey Settlement Parties in accordance with the Settlement Agreement: (1) a permanent supply of up to 16,000 acre-feet of the water conserved by lining certain unlined portions of the All-American Canal and its Coachella Branch; and (2) a permanent supply of power capacity and energy through a contract with the Yuma Area Contractors at no cost and at no further expense to the United States and the San Luis Rey Settlement Parties in an amount sufficient to convey the Settlement Parties’ portion of the conserved water from Lake Havasu through the Colorado River Aqueduct and to the places of use on the Bands’ reservations or in the service areas of Escondido and Vista;
- H. WHEREAS, the Parties anticipate that the Supplemental Water will become available incrementally, as certain unlined portions of the All American Canal and its Coachella Branch are lined;
- I. WHEREAS, the All-American Canal Lining Project and the Coachella Canal Lining Project are being constructed for the purpose of conserving water from the Colorado River which is now lost due to seepage, and when said projects have been constructed, Metropolitan and the San Diego County Authority will be able to obtain water as a result of those lining projects for municipal and domestic purposes within their service areas;
- J. WHEREAS, all Parties also recognize that Section 106 of the Settlement Act provides that the Secretary may utilize existing programs and authorities to facilitate the development of water for the Settlement Parties;
- K. WHEREAS, all Parties recognize that arrangements with Metropolitan for exchange of the Supplemental Water offer the most practical means for making the Supplemental Water available for use by the Settlement Parties, and, accordingly, all Parties have an interest in insuring the availability of the physical and economic infrastructure necessary to enable the use of the Supplemental Water developed under the Settlement Act;
- L. WHEREAS, all Parties wish to finalize a set of arrangements that provide Metropolitan with equitable and sustainable consideration for its role in

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providing for the timely utilization of the Supplemental Water by the Settlement Parties;

- M. WHEREAS, the Parties are committed to achieving the completion of these efforts which will allow them to commit staff and resources to the remaining critical activities necessary to implement the All American Canal Lining Project, the Coachella Canal Lining Project and the Settlement Act; and
- N. WHEREAS, all Parties recognize that the Settlement Parties have made significant contributions to the lining of the All American Canal and its Coachella Branch, and that the Department of the Interior has utilized and will continue to utilize its existing programs and authorities to promote mutually advantageous relationships among the Settlement Parties, Metropolitan, and the United States.

TERMS AND CONDITIONS

NOW THEREFORE, in consideration of the mutual covenants contained herein, Metropolitan, the United States, the Indian Water Authority, the Bands, and the Local Entities agree to the delivery and exchange of Supplemental Water and other valuable consideration in accordance with the following terms and conditions:

1. Quantity of Water Furnished by the United States.

The United States shall furnish Metropolitan with up to 16,000 acre-feet of Supplemental Water per year. The precise amount of Supplemental Water furnished shall be determined in accordance with the Allocation Agreement.

2. Term.

This Agreement shall commence on its effective date as defined in Section 28 and shall remain in effect for so long as Supplemental Water conserved by the All American Canal and Coachella Canal Lining Projects is available for use by the Settlement Parties.

3. Delivery Points of Supplemental Water to Metropolitan.

The United States shall furnish all Supplemental Water to be delivered to or exchanged with Metropolitan at the intake to Metropolitan's Colorado River Aqueduct, at a successor or substitute facility, or at such other location as is mutually agreed by the Parties.

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4. Delivery of Electrical Energy to Metropolitan.

a. Until the requirements of Section 104 of the Settlement Act have been satisfied, electrical energy provided by the Yuma Area Contractors pursuant to their letter agreement with the Settlement Parties dated October 10, 2000, shall be furnished to Metropolitan at the Gene Tie (subject to agreement with the Western Area Power Administration) or other mutually agreed upon location, at no cost and at no further expense to Metropolitan, the United States, or the Settlement Parties, 2,000 kWh of electrical energy for each acre-foot of Supplemental Water delivered each year. To the greatest extent feasible, said electrical energy shall be furnished continuously for delivery of such water.

b. After the requirements of Section 104 of the Settlement Act have been satisfied:

i. Electrical energy provided by the Yuma Area Contractors pursuant to their letter agreement with the Settlement Parties dated October 10, 2000 and/or the Packard Amendment, shall be furnished to Metropolitan at the Gene Tie (subject to agreement with the Western Area Power Administration) or other mutually agreed upon location, at no cost and at no further expense to Metropolitan, the United States, or the Settlement Parties, 2,000 kWh of electrical energy for each acre-foot of water exchanged each year. To the greatest extent feasible, said electrical energy shall be furnished continuously for exchange of water pursuant to this Agreement.

ii. If and to the extent that said electrical energy is not furnished through the Yuma Area Contractors as described in subparagraph i, the United States, pursuant to the Packard Amendment, shall nonetheless furnish said power annually and permanently at the lowest rate assigned to project use power within the jurisdiction of the Bureau of Reclamation in accordance with Exhibit E "Project Use Power" of the Agreement between Water and Power Resources Service, Department of the Interior, and Western Area Power Administration, Department of Energy (March 26, 1980), and the Settlement Parties shall pay the United States at such lowest rate assigned to project use power for all such power furnished. Such energy shall be furnished to Metropolitan at the Gene Tie (subject to agreement with the Western Area Power Administration) or other mutually agreed upon location.

iii. If and to the extent that said electrical energy is not furnished through the Yuma Area Contractors as described in subparagraph i, above, or by the United States as described in subparagraph ii, above, at their option, the Settlement Parties may furnish some or all of the electrical energy needed by Metropolitan to convey the Supplemental Water.

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iv. In the event and to the extent that neither the Yuma Area Contractors, the United States, nor the Settlement Parties furnish to Metropolitan 2,000 kWh of electrical energy for each acre foot of water to be exchanged, Metropolitan shall obtain said power from sources available to it, and the United States shall pay Metropolitan with funds previously advanced by the Settlement Parties for such power at Metropolitan's Average Unit Cost of Supplemental Power.

c. Subsections a and b are not intended to affect, modify, or negate any obligation that the Yuma Area Contractors or the United States may have to provide power pursuant to the Packard Amendment, the October 10, 2000 letter agreement between the Yuma Area Contractors and the Settlement Parties, or any other law or agreement, nor are they intended to affect any remedy that may be available to enforce those obligations.

d. Nothing in this Section creates any obligation of any kind for the United States to either provide or pay for transmission

5. Delivery and/or Exchange of the Supplemental Water.

a. Prior to the satisfaction of the requirements of Section 104 of the Settlement Act, the United States shall deliver to Metropolitan all or any portion of said Supplemental Water to the extent that such Supplemental Water would not displace any other water allocated to Metropolitan due to the availability of surplus water. Such Supplemental Water shall be delivered to Metropolitan in accordance with a monthly schedule provided by Metropolitan to the United States.

b. After the requirements of Section 104 of the Settlement Act have been satisfied, the United States shall deliver to Metropolitan all available Supplemental Water and Metropolitan shall provide by exchange a quantity of water to the United States for use by the Settlement Parties which is equal to the quantity of Supplemental Water delivered to Metropolitan.

6. Payments to Metropolitan for Providing Exchange Water.

a. The Settlement Parties shall advance funds to the United States for the purpose of making payments under this Section 6.

b. Metropolitan shall be paid \$97.19 for each acre-foot of water Metropolitan provides to the United States for use by the Settlement Parties in 2003 in exchange for Supplemental Water furnished to Metropolitan. Thereafter, the amount paid will increase at the rate of one and fifty-five hundredths percent (1.55%) per year for as long as this Agreement is in effect. A table showing the escalation of the payment per acre-foot through 2032 pursuant to this provision is attached as Exhibit B.

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c. In addition, Metropolitan shall be paid Metropolitan's Treatment Charges for all treated water provided to the United States for use by the Settlement Parties in exchange for Supplemental Water.

d. No other fees or charges, including but not limited to taxes, in lieu taxes, or annexation fees, shall be assessed or imposed by Metropolitan on the United States or the Settlement Parties in return for providing water in exchange for Supplemental Water.

e. Metropolitan shall invoice the United States and the United States shall make payments to Metropolitan, from funds previously received from the Settlement Parties, for the water provided by exchange in accordance with the provisions in Metropolitan's Administrative Code, sections 4507 and 4508, Billings and Payment for Water Deliveries, Additional Payment and Reporting in the Event of Delinquency in Payment for Water, as amended from time to time by Metropolitan's Board of Directors. It shall be the responsibility of Metropolitan to keep the United States and the Settlement Parties informed of amendments to these sections of its Administrative Code, but Metropolitan's failure to do so shall not relieve the United States of its obligations to make payments in accordance therewith from funds previously received from the Settlement Parties.

f. In the event the United States fails to make the payments required by this Agreement, Metropolitan shall give notice of such failure to the United States and to the Settlement Parties, along with a statement of the amount of the payment necessary to cure, and the United States and Settlement Parties shall have thirty (30) days from the date of such notice within which to cure. Only if the United States or the Settlement Parties do not timely cure may Metropolitan, in its sole discretion, terminate the exchange of Supplemental Water until all delinquent payments, including any applicable additional charges, have been paid.

g. Termination of the exchange of Supplemental Water until delinquent payments have been made, as provided in subsection 6.f, above, and dispute resolution as provided in Sections 16, 17, and 18, below, shall be Metropolitan's sole remedies for the failure of the United States or the Settlement Parties to make payments required by this agreement, provided that if Metropolitan has not been paid all amounts required by an arbitrator's award which has determined the amount owed within six months after a court of competent jurisdiction has entered a judgment or decree enforcing such arbitrator's award and that judgment or decree has become final, this Agreement shall automatically terminate with no further action required by Metropolitan.

7. Payments from Metropolitan for Supplemental Water and Related Power Delivered Prior to Satisfaction of Section 104.

a. As and to the extent that the Supplemental Water becomes available for use by Metropolitan as provided in subsection 5.a, above, Metropolitan shall pay the Indian Water Authority for such water at the rate of the greater of:

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- i. \$200.00 per acre-foot commencing on the effective date of this Agreement, or
 - ii. \$200.00 per acre-foot indexed to the annual change in the sum of Metropolitan's volumetric rates for water service commencing one year following the effective date of this Agreement.
- b. As and to the extent that electrical energy becomes available for use by Metropolitan to pump Supplemental Water as provided in Section 4.a, above, Metropolitan shall compensate the Indian Water Authority for power capacity and energy made available to Metropolitan for said purpose by the Yuma Area Contractors in an amount sufficient to pump the Supplemental Water in an amount per Megawatt-hour (MWh) which shall be determined by calculating the simple monthly average of off-peak energy prices for the month using the average of two widely published sources of energy indices. The index utilized will be that which most closely corresponds to the region in which Metropolitan procures Supplemental Energy; presently this region is designated South-Path 15 (SP-15). The sources of energy prices which shall be used shall be the Platts' Market Report and the Wall Street Journal's DJ Electricity Price Index, or their successors.
- c. The Indian Water Authority shall invoice Metropolitan for Supplemental Water and for the power furnished by the Yuma Area Contractors for use in delivering such water in the month following the month in which the Supplemental Water is delivered to Metropolitan by the United States for its use pursuant to this Agreement, and Metropolitan shall pay all such invoices within 30 days of receipt.
- d. Until the requirements of Section 104 of the Settlement Act are satisfied, the money paid by Metropolitan pursuant to this Section shall be held in trust by Metropolitan for the Indian Water Authority. It may be commingled with other Metropolitan funds, and shall bear interest at the average rate of interest earned by Metropolitan on its funds. Metropolitan shall provide monthly notices to the Indian Water Authority describing the status of the money held in trust pursuant to this Section 7, including the amount of interest earned on that money.
- e. After the requirements of Section 104 of the Settlement Act have been satisfied, the money held by Metropolitan pursuant to this Section, including all accrued interest, shall be paid to the Indian Water Authority.
- f. In lieu of the amounts set forth above, Metropolitan may pay for each acre foot of Supplemental Water made available for use by Metropolitan as provided in subsection 5.a, above, (including the 2,000 kilowatt-hours of electrical energy furnished to Metropolitan for pumping of that water) such amount as is mutually agreed by the Indian Water Authority and Metropolitan.

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8. Temporary Disruptions.

a. After the requirements of Section 104 of the Settlement Act have been satisfied, if and to the extent that Supplemental Water is not provided by the United States to Metropolitan due to a temporary disruption in its availability, Metropolitan, at the request of the Indian Water Authority, shall sell to the United States water needed by the Indian Bands for their use up to the amount of Supplemental Water temporarily disrupted, but only to the extent that providing such water will not result in shortages to Metropolitan's member public agencies. The United States shall pay Metropolitan its then current water rates and charges for this water from funds previously received from the Indian Water Authority in accordance with the procedures set forth in Section 6. Temporary disruptions shall not affect the term of this Agreement.

b. Metropolitan shall invoice the United States and the United States shall make payments to Metropolitan, from funds previously received from the Indian Water Authority, for the water provided pursuant to this Section in accordance with the provisions in Metropolitan's Administrative Code, Sections 4507 and 4508, Billings and Payment for Water Deliveries, Additional Payment and Reporting in the Event of Delinquency in Payment for Water, as amended from time to time by Metropolitan's Board of Directors. It shall be the responsibility of Metropolitan to keep the United States and the Settlement Parties informed of amendments to these sections of its Administrative Code, but Metropolitan's failure to do so shall not relieve the United States of its obligations to make payments in accordance therewith from funds previously received from the Indian Water Authority.

c. In the event the United States fails to make the payments required by this Section, Metropolitan shall give notice of such failure to the United States and the Indian Water Authority, along with a statement of the amount of the payment necessary to cure, and the United States and the Indian Water Authority shall have thirty (30) days from the date of such notice within which to cure. Only if the United States or the Indian Water Authority does not timely cure may Metropolitan, in its sole discretion, terminate the provision of water during a temporary disruption until all delinquent payments, including any applicable additional charges, have been paid.

d. Termination of the provision of water during a temporary disruption of Supplemental Water until delinquent payments have been made, as provided in subsection c, above, and dispute resolution as provided in Sections 16, 17, and 18, below, shall be Metropolitan's sole remedies for the failure of the United States and the Indian Water Authority to make payments required by this Section.

9. Provision of Water by Metropolitan.

a. To the extent that it is operationally feasible, the Settlement Parties shall be permitted, at no expense to Metropolitan, to have one or more direct connections to Metropolitan's water distribution system constructed, either by themselves or in

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conjunction with others. Any such connection(s) shall be constructed either using the procedures set forth in Sections 4700 et seq. of Metropolitan's Administrative Code for construction of service connections requested by member public agencies, or pursuant to separate agreement with Metropolitan, and shall be subject to applicable environmental compliance.

b. Metropolitan shall provide water in exchange for Supplemental Water and any water provided in the event of temporary disruptions of Supplemental Water at the terminus of Metropolitan's water distribution system in San Diego County and/or at one or more direct connections to Metropolitan's water distribution system.

c. In the event there is a failure or malfunction in any part of Metropolitan's water distribution or conveyance system between the point where the United States furnishes Supplemental Water to Metropolitan and the point in Metropolitan's distribution or conveyance system where Metropolitan is to provide water to the United States for use by the Settlement Parties, including but not limited to a failure or malfunction caused by an Uncontrollable Force, Metropolitan will provide water to the United States for use by the Settlement Parties in the same manner as it provides water to its member public agencies which receive water from the same pipelines.

d. The water provided by Metropolitan pursuant to this Agreement shall be metered at the point or points of transfer from Metropolitan's water distribution system described in paragraph 9(b) above. Metropolitan shall not be responsible for any loss of water after the water leaves its distribution system.

e. All requests for water pursuant to this Agreement shall be made as follows:

i. For water which is to be provided via direct connections to Metropolitan's water distribution system, requests shall be made directly to Metropolitan in accordance with Metropolitan's procedures in effect at the time of the request for similar requests by its member public agencies.

ii. For water that is to be provided via facilities that are owned by other entities, requests shall be made in conjunction with such other entities.

f. Metropolitan shall not be responsible for any costs incurred in delivering the water beyond Metropolitan's existing distribution system.

g. The Settlement Parties shall also provide Metropolitan with an estimate of the schedule for the provision of water before April 1 of each year, in form provided by Metropolitan, with an estimate of the amounts of water to be furnished through any direct connection to Metropolitan's distribution system. Each estimate shall contain, at a minimum, for each direct connection to Metropolitan's distribution system and for each month of the year beginning with the succeeding July 1, and for all service connections

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collectively for each month of the succeeding four years, the quantity of water to be provided directly by Metropolitan to the United States. The estimate shall constitute the Settlement Parties' initial request for deliveries for the first of the five years covered therein.

10. Quality of Water Provided by Metropolitan

The United States may obtain either treated or untreated water from Metropolitan for use by the Settlement Parties pursuant to this Agreement, and Metropolitan shall only be obligated to provide water of the same quality as is or would be provided to its member public agencies at the same point for treated or untreated water, as the case may be.

11. Use of Water Provided.

a. Subject to any applicable federal approvals, the water provided by Metropolitan in exchange for Supplemental Water furnished to it by the United States shall only be:

- i. used by the Bands on their reservations,
- ii. used by the Local Entities within their service areas,
- iii. exchanged for water from other sources for use on the Bands' reservations or in the Local Entities' service areas, and/or
- iv. leased by the Bands for use by the Local Entities in their service areas.

b. Water provided by Metropolitan through this Agreement shall not be used in any manner that results in such water or water exchanged for such water being used outside of the reservations or outside of the service areas of the Local Entities or in a manner that would permit or result in a displacement of a sale of water by Metropolitan to persons other than the Settlement Parties.

c. Any deliveries of water to the United States for use by the Settlement Parties using facilities owned by persons or entities who are not parties to this Agreement will be the subject of a separate agreement or agreements between the United States and/or the Settlement Parties and such persons or entities.

d. Nothing in this Section shall be construed as consent by Metropolitan to use of water provided by Metropolitan to the United States for use by the Indian Water Authority or any or all of the Indian Bands outside of the boundaries of the reservations or the service areas of the Local Entities.

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12. Reliability of Deliveries.

Deliveries of available supplies to the United States for the use of the Settlement Parties will be made in the same manner as deliveries to Metropolitan's member public agencies that receive deliveries from the same pipeline(s). Whenever repairs or maintenance of Metropolitan's distribution system shall require suspension of delivery of water, such delivery may be suspended without liability on the part of Metropolitan provided, that except in cases of emergency, as determined by the Chief Executive Officer of Metropolitan, notice of such suspension of service shall be given to the Settlement Parties in advance of such suspension.

13. Indemnity and Hold Harmless.

Except for the United States, which shall be neither benefited nor burdened by this indemnity and hold harmless provision, each Party agrees to defend, indemnify and hold harmless the other Parties, their directors, agents, officers, employees, and authorized volunteers, from all costs, damages, liability, and claims caused by or arising out of or relating to that Party's own negligence. To the extent that more than one Party is determined to have been negligent, the Parties agree that each Party shall bear its own portion or percentage of liability based on principles of comparative fault and to indemnify and hold harmless the other Parties from that share.

14. Amendment.

Except as expressly provided herein, this Agreement contains the entire agreement between the Parties relating to the transactions contemplated hereby, and prior or contemporaneous agreements, understandings, or representations and statements, oral or written, are merged herein. No modification, waiver, amendment, discharge, or change of this agreement shall be valid unless the same is in writing and signed by the Parties against whom enforcement of such modification, waiver, amendment, discharge, or change is or may be sought.

15. Assignment; Successors in Interest.

No Party may assign or transfer any of its rights or obligations under this Agreement without the express written consent of all of the other Parties hereto. This Agreement shall be binding on and inure to the benefit of the Parties and their successors in interest.

16. Dispute Resolution; Mediation.

a. If a dispute not involving the United States arises out of or relates to this Agreement, or the breach thereof, and it is not resolved informally, the Parties shall attempt to resolve it by using the procedures set forth in this Section before resorting to arbitration or litigation. A Party requesting resolution of a dispute shall send written

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notice to all other Parties that shall set forth in detail the position of the Party requesting resolution. Within 60 days of the notice being sent, the Secretary, the General Manager of the Indian Water Authority, the chairperson of each of the Indian Bands, the Chief Executive Officer of Metropolitan, the Utilities Director of Escondido, and the General Manager of Vista or the respective authorized representatives of the Parties shall schedule a meeting, meet and attempt to resolve the dispute by a unanimous decision. In the event that all Parties' representatives are not present, a letter with the proposed action, signed by all the attending Parties' representatives, shall be sent to the absent Party's (Parties') representative(s) by certified mail, postage prepaid, return receipt requested. If no written protest from the absent Party's (Parties') representative is received by the other Parties within 60 days of the date of receipt of the letter with the proposed action, the decision shall be deemed unanimous and become final. Any written protest shall be mailed to each other Party's representative, and to each of the Parties by certified mail, postage prepaid, return receipt requested. Each Party shall bear its own expense for the dispute resolution proceedings. Any resolution shall be in writing and be binding on the Parties to this Agreement.

b. If said dispute cannot be settled through negotiation or through the procedure described above within 90 days of the conclusion of the dispute resolution meeting, the Parties agree to try in good faith to settle the dispute by mediation under the Commercial Mediation Rules of the American Arbitration Association

17. Dispute Resolution by Arbitration if Mediation Fails.

a. In the event that any dispute not involving the United States is not resolved using the procedure set forth in Section 16 above, said dispute shall be resolved by arbitration administered by the American Arbitration Association in accordance with its Commercial Arbitration Rules except as provided herein and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof.

b. Within thirty days after commencement of arbitration, the Settlement Parties/United States and Metropolitan shall each select one person to act as arbitrator, and the two selected shall select a third arbitrator within thirty days of their appointment. If the arbitrators selected by the Parties are unable to or fail to agree upon a third arbitrator, the American Arbitration Association shall select the third arbitrator. The third arbitrator shall act as chairperson of the arbitration panel and shall be independent from all Parties, having no past, present or pending relationship with any of the parties, unless unanimously consented thereto by the Parties to the dispute.

c. Arbitration shall be limited to the consideration and resolution of the issue(s) submitted. The panel of arbitrators shall not rewrite, change, or amend this Agreement. Any payment adjustments shall accrue interest monthly at the average rate earned by Metropolitan on its funds from the date the adjusted payment should have been paid until paid in full.

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d. The award of the arbitrators shall be in writing, shall be accompanied by a reasoned opinion, shall be signed by a majority of the arbitrators, and shall be rendered within 120 days after the date of the selection of the third arbitrator. Each Party shall bear the expense of its own counsel, experts, witnesses, and preparation and presentation of evidence. The administrative fees of arbitration and arbitrators' fees shall be borne 50 percent by Metropolitan and 50 percent by the Indian Water Authority, Vista, and Escondido, jointly.

18. Disputes Involving the United States.

Disputes under this Agreement involving the United States shall be presented first to the Regional Director of the Lower Colorado Region of the Bureau of Reclamation. The Regional Director shall be deemed to have denied the other Party's(ies') contention or claim if it is not acted upon within 30 days of its having been presented. The decision of the Regional Director shall be subject to appeal to the Commissioner of Reclamation by a notice of appeal accompanied by a statement of reasons filed with the Commissioner of Reclamation within 30 days after such decision. The Commissioner of Reclamation shall be deemed to have denied the other Party's(ies') contention or claim if it is not acted upon within 30 days of its having been presented. The decision of the Commissioner of Reclamation shall be subject to appeal to the Secretary by a notice of appeal accompanied by a statement of reasons filed with the Secretary within 30 days after such decision. The Secretary shall be deemed to have denied the appeal if it is not acted upon within 30 days of its having been presented. The decision of the Secretary may then be appealed to the federal courts to the extent permitted by and in accordance with federal law.

19. Waiver of Sovereign Immunity.

The Indian Water Authority and the Indian Bands hereby each grant a limited waiver of sovereign immunity from an unconsented suit for the sole purpose of permitting or compelling arbitration as provided in Section 18 and consent to the jurisdiction of, and to be sued in, the United States District Court for the Southern District of California, the United States Court of Appeals for the Ninth Circuit, and the United States Supreme Court for the purpose of compelling arbitration or enforcing an arbitration award or judgment. If the United States District Court for the Southern District of California lacks jurisdiction, the Indian Water Authority and the Indian Bands consent to be sued in the California state court system, or any other court of competent jurisdiction. The Indian Water Authority and the Indian Bands hereby waive any requirement of exhaustion of tribal remedies. The Indian Water Authority and the Indian Bands do not waive any aspect of their sovereign immunity with respect to actions by persons or entities not parties to this Agreement. This waiver of sovereign immunity from suit is limited to (i) an action to compel arbitration pursuant to Section 18 of this Agreement; and (ii) enforcement of a determination by the arbitrators that the Indian Water Authority or the Indian Bands owe money pursuant to the terms of this Agreement.

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20. Agreement Not a Precedent.

This Agreement shall not be regarded as a precedent for future delivery and exchange agreements or other arrangements.

21. Settlement Act Not Affected.

Nothing in this Agreement shall be deemed to modify or affect the obligations and responsibilities of the United States and the Settlement Parties under the Settlement Act.

22. Non-Waiver.

None of the provisions of this Agreement shall be considered waived by any Party except when such waiver is given in writing. The failure of any Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or their relinquishment of any such rights for the future, but such provisions and rights shall continue and remain in full force and effect.

23. No Third-Party Rights.

The Parties do not intend to create rights in or to grant remedies to any third party or others as a beneficiary of this Agreement or of any duty, covenant, obligation or undertaking established hereunder.

24. Uncontrollable Force.

None of the Parties shall be considered to be in default in the performance of any of its obligations under this Agreement when a failure of performance shall be due to an uncontrollable force. The term "uncontrollable force" shall mean an action of the elements, excluding severe and/or prolonged low-flow conditions on the Colorado River; the act or threat of any public enemy; Acts of God; court order; war and war defense conditions; and strikes or other labor disputes; or other causes beyond its control. Each Party shall use reasonable diligence to avoid any such delay or default and to resume performance under this Agreement as promptly as possible after any such delay or default. However, nothing contained herein shall be construed so as to require a Party to settle any strike or labor dispute in which it may be involved. Any Party rendered unable to fulfill any of its obligations under this Agreement by reason of an uncontrollable force shall give prompt written notice of such fact to the other Parties and shall exercise due diligence to remove such inability to the fullest extent practicable with all reasonable dispatch.

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25. Governing Law.

This Agreement shall be interpreted, governed by and construed under applicable federal law and the laws of the State of California to the extent such state laws are not inconsistent with any applicable federal law.

26. Notices.

Any notice given under this Agreement shall be effective when deposited postage prepaid with the United States Postal Service, addressed to the respective parties as follows:

Secretary of the Interior
U.S. Department of the Interior
18th and C Streets, Northwest
Washington, D. C. 20240

Chief Executive Officer
The Metropolitan Water District
of Southern California

By personal service or overnight delivery:
700 North Alameda Street
Los Angeles, California 90012-2944

By U.S. mail:
Post Office Box 54153
Los Angeles, California 90054-0153

General Manager
San Luis Rey River Indian Water Authority
1010 Pauma Reservation Road
P.O. Box 428
Pauma Valley, California 92061

City Manager
(With additional copy to City Attorney)
City of Escondido
201 North Broadway
Escondido, California 92025

General Manager
Vista Irrigation District
1391 Engineer Street
Vista, California 92081-8836

AGREEMENT RELATING TO SUPPLEMENTAL WATER
October 10, 2003
Page 19

La Jolla Band of Mission Indians
Attn: Chairperson
22000 Hwy. 76 Pauma Valley, California 92061

Pala Band of Mission Indians
Attn: Chairperson
35955 Pala Temecula Road
P.O. Box 50
Pala, California 92059-0043

Pauma Band of Mission Indians
Attn: Chairperson
1010 Pauma Reservation Road
P.O. Box 369
Pauma Valley, California 92061

Rincon Band of Mission Indians
Attn: Chairperson
33750 Valley Center Road
P.O. Box 68
Valley Center, California 92082

San Pasqual Band of Mission Indians
Attn: Chairman
27458 N. Lake Wohlford Road
P.O. Box 365
Valley Center, California 92082

27. Change of Address.

Any Party may change the addressee or address to which notices are to be sent by giving notice of such change of addressee or address in conformity with the provisions of Section 26 for the giving of notice.

28. Effective Date and Approval.

The effective date of this Agreement shall be the last date on which all of the following events shall have occurred:

a. Approval by the governing bodies of Metropolitan, Escondido, Vista, the Indian Water Authority, and each of the Indian Bands, and due execution of this Agreement by all Parties.

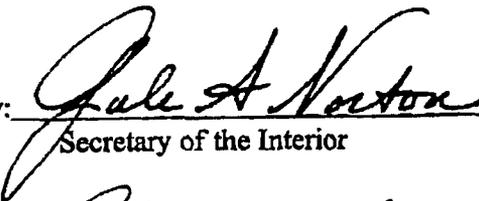
b. Execution of this Agreement by the Secretary.

AGREEMENT RELATING TO SUPPLEMENTAL WATER
October 10, 2003
Page 20

c. The Allocation Agreement has become effective.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

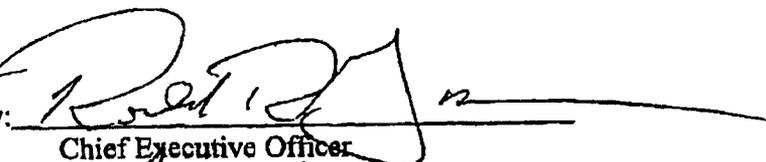
UNITED STATES OF AMERICA

By: 
Secretary of the Interior

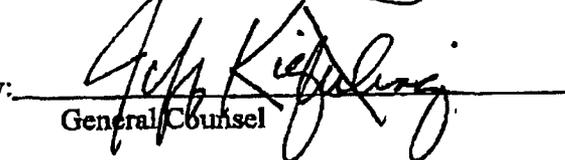
Approved as to form:

By: 

THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

By: 
Chief Executive Officer

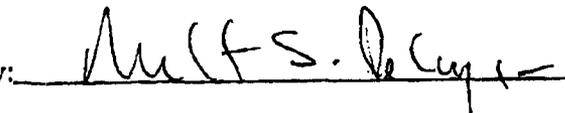
Approved as to form:

By: 
General Counsel

SAN LUIS REY RIVER INDIAN WATER
AUTHORITY

By: 

Approved as to form:

By: 

AGREEMENT RELATING TO SUPPLEMENTAL WATER
October 10, 2003
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LA JOLLA BAND OF MISSION INDIANS

By: *[Signature]*
Chairman

Approved as to form:

By: *[Signature]*

RINCON BAND OF MISSION INDIANS

By: *[Signature]*

Approved as to form:

By: *[Signature]*

SAN PASQUAL BAND OF MISSION INDIANS

By: *[Signature]*

Approved as to form:

By: *[Signature]*

PAUMA BAND OF MISSION INDIANS

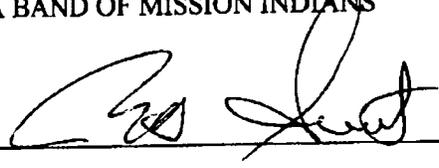
By: *[Signature]*

Approved as to form:

By: *[Signature]*

AGREEMENT RELATING TO SUPPLEMENTAL WATER
October 10, 2003
Page 22

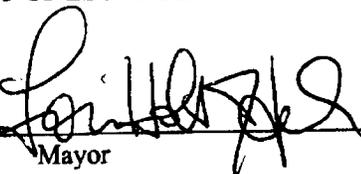
PALA BAND OF MISSION INDIANS

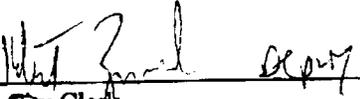
By: 

Approved as to form:

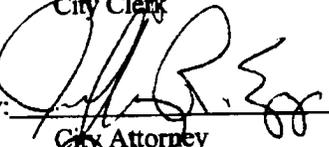
By: Barbara Larshmer

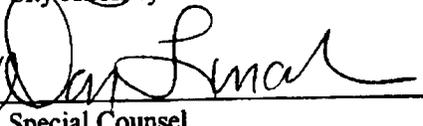
CITY OF ESCONDIDO

By: 
Mayor

By: 
City Clerk

Approved as to form:

By: 
City Attorney

By: 
Special Counsel

AGREEMENT RELATING TO SUPPLEMENTAL WATER
October 10, 2003
Page 23

VISTA IRRIGATION DISTRICT

By: 
President, Board of Directors

By: 
General Manager

Approved as to form:

By: 
General Counsel

AGREEMENT RELATING TO SUPPLEMENTAL WATER
October 10, 2003
Page 24

Exhibit A

Copy of October 10, 2000 Letter Agreement between the Yuma Area Contractors and the Settlement Parties.

YUMA AREA AGGREGATE POWER MANAGERS

Wellton-Mohawk Irrigation & Drainage District
30570 Wellton-Mohawk Drive
Wellton, Arizona 85356
(520) 785-3351
(520) 785-3389 fax

Yuma County Water Users' Association
Post Office Box 5775
Yuma, Arizona 85366-5775
(520) 627-8824
(520) 627-3065 fax

October 10, 2000

Ben Magante, President
San Luis Rey River Indian Water Authority
P.O. Box 428
Pauma Valley, California 92061

Jeffrey R. Epp, City Attorney
City of Escondido
Civic Center Plaza
201 North Broadway
Escondido, California 92025

John A. Amodeo, General Manager and Chief Engineer
Vista Irrigation District
202 West Connecticut Avenue
Vista, California 92083-3696

Re: Provision of power capacity and energy for the benefit of the San Luis Rey Indian Water Rights Settlement

Gentlemen:

Pending legislation would give the Indian Bands represented by the San Luis Rey River Indian Water Authority, the City of Escondido, and Vista Irrigation District ("Settlement Parties") the right to power capacity and energy at Parker-Davis project use rates sufficient to convey up to 16,000 acre-feet of water from Lake Havasu through the Colorado River Aqueduct and to the places of use on the Bands' reservations or in the local entities' service areas in San Diego County. Such a right could be incompatible with the interests of the Yuma County Water Users' Association and the Wellton-Mohawk Irrigation and Drainage District which together comprise the Yuma Area Aggregate Power Managers ("Yuma Area Contractors") as identified in Bureau of Reclamation Contracts numbered 6-CU-30-P1136, 6-CU-30-P1137, and 6-CU-30-P1138 ("Yuma Area Contracts").

The Yuma Area Contractors seek the assistance of the Settlement Parties to avoid such a result, to provide at no expense power capacity and energy sufficient to convey 16,000 acre-feet of water annually as described below, and further to obtain authorization from the Secretary of the Interior for the Yuma Area Contractors to use permanently federal project use power for the full range of purposes as identified in the Yuma Area Contracts. In consideration for the assistance of the Settlement Parties in obtaining that authority, and for other good and valuable consideration, the Yuma Area Contractors, their successors and assigns, hereby agree to provide

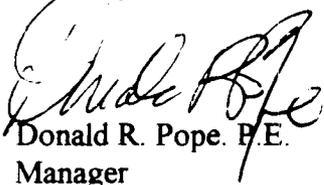
Messrs. Magante, Epp and Amodeo
October , 2000
Page 2

annually and permanently, at no cost to the United States, the Bands as defined in section 102(1) of Public Law 100-675, the Indian Water Authority as defined in Section 102(3) of Public Law 100-675, and the local entities as defined in section 102(4) of Public Law 100-675, not to exceed seven (7) megawatts capacity and 32,000 megawatt hours energy annually to convey 16,000 acre-feet of water (estimated at 2000 kilowatt hours per acre-foot) from Lake Havasu through the Colorado River Aqueduct and to the places of use on the Bands' reservations or in the local entities' service areas. Provision of such power capacity and energy shall be contingent upon enactment into law of the amendment to Section 106 of the of the San Luis Rey Indian Water Rights Settlement Act (Public Law 100-675, 102 Stat. 4000) attached hereto and commence on the date when conserved water from the works authorized by Title II of Public Law 100-675 first becomes available.

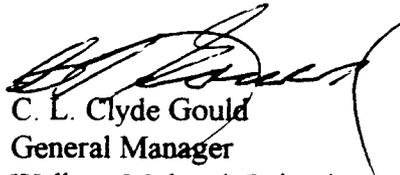
The undersigned represent that they are fully authorized to make this agreement on behalf of the Yuma Area Contractors.

Please indicate your agreement and acceptance at the foot of this letter. This may be executed in counterparts. Time is of the essence.

Sincerely,



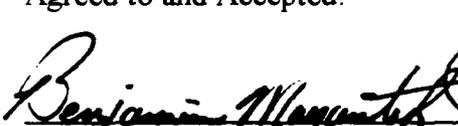
Donald R. Pope, P.E.
Manager
Yuma County Water Users' Association
Yuma, Arizona 85364



C. L. Clyde Gould
General Manager
Wellton-Mohawk Irrigation and Drainage District
Wellton, Arizona 85356

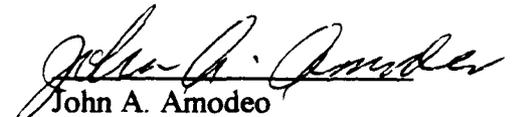
Attachment

Agreed to and Accepted:



Ben Magante, President
San Luis Rey River
Indian Water Authority

Jeffrey R. Epp, City Attorney
City of Escondido



John A. Amodeo
General Manager and
Chief Engineer
Vista Irrigation District

Date 10-14-00

Date 10/19/00

Date 10/23/00

**AGREEMENT BETWEEN
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
AND THE SAN DIEGO COUNTY WATER AUTHORITY
REGARDING ALLOCATION OF THE BENEFITS OF THE
BIOLOGICAL OPINION FOR INTERIM SURPLUS CRITERIA,
SECRETARIAL IMPLEMENTATION AGREEMENTS, AND CONSERVATION
MEASURES ON THE LOWER COLORADO RIVER, LAKE MEAD TO THE
SOUTHERLY INTERNATIONAL BOUNDARY,
ARIZONA, CALIFORNIA AND NEVADA
DATED JANUARY 12, 2001**

This Agreement (“Agreement”) Between The Metropolitan Water District of Southern California (“MWD”) and the San Diego County Water Authority (“SDCWA”) Regarding Allocation of the Benefits of the Biological Opinion for Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary, Arizona, California and Nevada Dated January 12, 2002 (“BO”) is made and entered into as of October 10, 2003. MWD and SDCWA are sometimes referred to herein collectively as the “Parties” or each individually as a “Party.”

RECITALS

A. MWD is a public agency of the State of California incorporated under the Metropolitan Water District Act, Stats. 1969, ch. 209, as amended, engaged in transporting, storing and distributing water in the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura, within the State of California.

B. SDCWA is a county water authority incorporated under the California County Water Authority Act, Stats. 1943, ch. 545, as amended, for the purpose of providing its member agencies in San Diego County with a safe, reliable and sufficient supply of imported water.

C. This Agreement is one of several agreements executed and delivered as of the date hereof by the Parties and other agencies related to the allocation and use of water from the

Colorado River, including the Quantification Settlement Agreement Among the Imperial Irrigation District (“IID”), MWD and Coachella Valley Water District (“CVWD”).

D. On April 29, 1998, SDCWA and IID entered into an Agreement for Transfer of Conserved Water, as amended by the Revised Fourth Amendment between SDCWA and IID dated as of the date hereof (as thereby amended, the “Transfer Agreement”), which provides for the transfer of up to two hundred thousand (200,000) acre-feet per year of Colorado River water from IID to SDCWA.

E. The Parties and other agencies also executed as of this date the Allocation Agreement Among the United States of America; MWD; CVWD; IID; SDCWA; and the La Jolla, Pala, Pauma, Rincon and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido and Vista Irrigation District (collectively, the “San Luis Rey Settlement Parties”), pertaining to the allocation and distribution of water to be conserved from the All-American Canal Lining Project and the Coachella Canal Lining Project (as such terms are defined therein), which allocated up to seventy-seven thousand, seven hundred (77,700) acre-feet per year of Colorado River water to SDCWA and up to sixteen thousand (16,000) acre-feet per year of Colorado River water to either MWD or the San Luis Rey Settlement Parties, as provided therein.

F. The United States Fish and Wildlife Service (“FWS”) issued a BO, regarding certain conservation measures, mitigation measures and reasonable and prudent measures (collectively, the “Measures”) required to implement certain proposed actions by the United States Bureau of Reclamation (“Reclamation”), including changes in the point of delivery and diversion of Colorado River water, that were necessary for Reclamation to implement the Colorado River Water Delivery Agreement (“CRWDA”) between the United States by and

through the Secretary of the Interior, IID, CVWD, MWD and SDCWA dated as of the date hereof, and to facilitate the transfers under the Quantification Settlement Agreement, the Transfer Agreement, and the Allocation Agreement.

G. As of the date hereof, the Parties entered into the Funding Agreement Among Reclamation, MWD and SDCWA Regarding Implementation of Conservation and Mitigation Measures Identified in United States Fish and Wildlife Service Biological Opinion Dated January 12, 2001, "For Interim Surplus Criteria (Hereinafter "Guidelines"), Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary, Arizona, California, and Nevada" ("Funding Agreement"), which provided in Section 2 thereof that MWD and SDCWA would allocate the benefits derived from compliance with the Measures of the BO through a separate agreement between SDCWA and MWD.

H. The transfer of up to two hundred thousand (200,000) acre-feet per year of Colorado River water to SDCWA under the Transfer Agreement and the allocation of up to seventy-seven thousand, seven hundred (77,700) acre-feet per year of Colorado River Water to SDCWA under the Allocation Agreement require use of a portion of the benefits derived from compliance with the Measures of the BO.

I. MWD is a party to various agreements resulting in potential transfers of Colorado River water to MWD on schedules yet to be determined, and may become a party to additional transfer agreements in the future, which will require use of a portion of the benefits derived from compliance with the Measures of the BO.

J. This Agreement is intended by the Parties to constitute the separate agreement referenced in Section 2 of the Funding Agreement.

AGREEMENT

NOW THEREFORE, in consideration of the foregoing recitals and the representations, warranties, covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, MWD and SDCWA agree to the following terms and conditions of this Agreement:

1. Basic Provision. The Parties agree that the benefits derived from compliance with the Measures set forth in the BO allowing changes in the point of delivery and diversion for 400,000 acre-feet per year of Colorado River water under the Funding Agreement (“Coverage”) shall be apportioned and shared by the Parties as if they are tenants in common for the purpose of effectuating the Colorado River water transfers described in Recitals H and I.

2. Joint Use. Acting as if they are tenants in common, the Parties may each make use of any and all Coverage provided by the BO for the purposes of implementing the water transfers described in Recitals H and I. However, SDCWA’s use and enjoyment of the Coverage shall be expressly limited to the water made available under the Transfer Agreement and the Allocation Agreement. MWD may elect, in its complete discretion, to use the Coverage for any water transfer.

3. Priority of Use of Coverage. To the extent there is insufficient Coverage within the BO for all proposed transfers of water in any given year, first priority shall be given to the water transferred to SDCWA under the Transfer Agreement and the water allocated to SDCWA and MWD or the San Luis Rey Settlement Parties under the Allocation Agreement, and second priority shall be given to any other transfers of water that MWD may elect, so long as the total amount of water having first and second priorities under this Section 3 does not exceed 400,000 acre-feet in any calendar year.

4. Additional Coverage. If after ten (10) years from the effective date of this Agreement, as set forth in Section 6 hereof, the proposed transfers or allocations of Colorado River water to SDCWA and MWD requiring coverage under the BO are projected to exceed four hundred thousand (400,000) acre-feet in any given calendar year, then SDCWA and MWD agree to cooperate with each other to obtain additional coverage to the extent their combined transfers are projected to exceed four hundred thousand (400,000) acre-feet per year, up to a maximum of an additional seventy-five thousand (75,000) acre-feet per year.

5. Reimbursement of Costs for Additional Coverage. Reimbursement of costs attributable to obtaining the additional coverage will be borne by the Party that uses the additional coverage. Use of additional coverage will be determined over time based on the provisional allocation of 277,700 acre-feet per year to SDCWA and 122,300 acre-feet per year to MWD.

6. Effective Date and Term. This Agreement shall be effective as of the Effective Date of the Quantification Settlement Agreement, as that term is defined therein, and shall remain in effect so long as the BO is in effect.

7. Liability and Indemnity. Neither Party to this Agreement nor any of its directors, officers, agents, employees or authorized volunteers shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by any other Party to this Agreement in connection with any work, obligation, authority, or any criteria arising out of this Agreement. Each Party to this Agreement shall defend, indemnify, and hold each other Party to this Agreement, its directors, officers, agents, employees and authorized volunteers, harmless against all liability, claims, or other loss, and whether direct, or indirect or consequential, which may occur as a result of activities conducted by it under this Agreement, together with

reasonable attorney's fees and costs and expenses incurred by a Party in negotiating, settling, defending, or otherwise protecting against such liability, claims, and loss.

8. No Third-Party Rights. This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns. Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

9. Binding Effect. This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities.

10. Ambiguities. Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

IN WITNESS THEREOF, the Parties have hereunto set their hands on the date first above written.

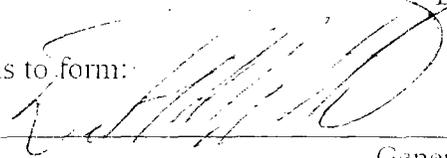
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

By: 
Chief Executive Officer

Approved as to form:
By: 
General Counsel

SAN DIEGO COUNTY WATER AUTHORITY

By: 
General Manager

Approved as to form:
By: 
General Counsel

**AMENDED AND RESTATED AGREEMENT BETWEEN THE
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
AND THE SAN DIEGO COUNTY WATER AUTHORITY
FOR THE EXCHANGE OF WATER**

THIS AMENDED AND RESTATED AGREEMENT FOR THE EXCHANGE OF WATER ("Agreement") is made and entered into as of October 10, 2003, between The Metropolitan Water District of Southern California (hereinafter "Metropolitan") and the San Diego County Water Authority (hereinafter "SDCWA"). Metropolitan and SDCWA are sometimes referred to as the "Parties".

RECITALS

A. SDCWA is a county water authority incorporated under the California County Water Authority Act, Stats. 1943, c.545 as amended, codified at Section 45-1 *et seq.* of the Appendix to the California Water Code, for the purpose of providing its member agencies in San Diego County with a safe, reliable, and sufficient supply of imported water.

B. Metropolitan is a public agency of the State of California incorporated under the Metropolitan Water District Act, Stats. 1969, ch. 209, as amended, codified at Section 109.1 *et seq.* of the Appendix to the California Water Code, engaged in transporting, storing and distributing water in the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura, within the State of California.

C. SDCWA is a member agency of Metropolitan.

D. On April 29, 1998, SDCWA and the Imperial Irrigation District ("IID") entered into an Agreement for Transfer of Conserved Water, as amended by the Revised Fourth Amendment dated as of October 10, 2003, between SDCWA and IID (as thereby amended, the "Transfer Agreement").

E. On November 10, 1998, SDCWA and Metropolitan executed a Contract for the Exchange of Water to be acquired by SDCWA under the Transfer Agreement; this Agreement amends and restates that Contract in its entirety.

F. This Agreement is one of several agreements executed and delivered as of the date hereof by the Parties and by other agencies, including IID, MWD and Coachella Valley Water District ("CVWD"), pursuant to the Quantification Settlement Agreement among IID, MWD and CVWD dated as of October 10, 2003 (the "QSA"), which settles a variety of long-standing disputes regarding the priority, use, and transfer of Colorado River water and establishes the terms for the further distribution of Colorado River water among these entities for up to seventy-five (75) years based upon the water budgets set forth therein.

G. Also, on October 10, 2003, as contemplated by the QSA, SDCWA entered into the Allocation Agreement with the United States of America, IID, CVWD, MWD and other parties named therein (the "Allocation Agreement") pertaining to the allocation and distribution of water to be conserved from the All-American Canal Lining Project and the Coachella Canal Lining Project (as such terms are defined therein).

AGREEMENT

NOW THEREFORE, the Parties in consideration of the foregoing recitals and the representations, warranties, covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, Metropolitan and SDCWA agree to the following terms and conditions of this Agreement:

I.

DEFINITIONS AND RULES OF CONSTRUCTION

1.1 Definitions. As used in this Agreement these terms, including any grammatical variations thereof, have the following meanings:

- (a) "Administrative Code" means the Metropolitan Water District Administrative Code adopted on January 13, 1987, as amended from time to time thereafter, and as in existence on the date of this Agreement, subject to modification to the extent provided in Paragraph 13.12 of this Agreement.
- (b) "Allocation Agreement" is as defined in Recital G, subject to modification for purposes of this Agreement after the date hereof to the extent provided in Paragraph 13.13 of this Agreement.
- (c) "Alternative Facilities" means facilities other than facilities owned and operated by Metropolitan.
- (d) "Bureau" means the Bureau of Reclamation of the United States Department of the Interior.

(e) "California Plan" means the draft plan dated May 11, 2000, to ensure that California can live within the state's apportionment of Colorado River water; provided, however, if any final California Plan is approved by the Colorado River Board of California and all the public agencies represented on the Colorado River Board of California, "California Plan" means such final California Plan.

(f) "Canal Lining Water" means the quantity of Colorado River water allocated each Year to SDCWA in accordance with the Allocation Agreement.

(g) "Colorado River Aqueduct" means the aqueduct system owned and operated by Metropolitan and transporting water from Lake Havasu on the Colorado River to Lake Mathews in Riverside County, California.

(h) "Conserved Water" means Conserved Water as such term is defined in Section 1.1 of the QSA.

(i) "Drought Management Plan" means any plan for the allocation and management of water resources of Metropolitan during a water shortage, as adopted by Metropolitan and in effect at pertinent times during the term of this Agreement.

(j) "Early Exchange Water" means the Exchange Water to be delivered by Metropolitan to SDCWA in exchange for Early Transfer Water to be Made Available by SDCWA to Metropolitan under this Agreement.

(k) "Early Transfer Water" means the aggregate ten thousand (10,000) acre-feet of Conserved Water to be transferred to SDCWA by IID in accordance with Section 3.5 of the Transfer Agreement.

(l) "Effective Date" means the Effective Date as such term is defined in Section 1.1 of the QSA.

(m) "Exchange Water" means, for each Year, water that is delivered to SDCWA by Metropolitan at the Metropolitan Point(s) of Delivery in a like quantity as the quantity of water that SDCWA has Made Available to Metropolitan under the Transfer Agreement and/or the Allocation Agreement and this Agreement for the same Year. The Exchange Water may be from whatever source or sources and shall be delivered using such facilities as may be determined by Metropolitan, provided that the Exchange Water delivered in each Year is of like quality to the Conserved Water and/or the Canal Lining Water which is Made Available to Metropolitan at the SDCWA Point of Transfer in such Year.

(n) "IID" is as defined in Recital D.

(o) "Implementation Agreement" is as defined in Section 1.1 of the QSA.

(p) "Interim Agricultural Water Program" means the program by that name for delivery of water for agricultural uses regulated in Sections 4900 to 4906 of the Administrative Code, including any successor program established by Metropolitan.

(q) "Local Water" means water supplies not served by Metropolitan. Such Local Water includes, for example, ground water, surface water production, recycled water, desalinated water and other water acquired, owned or produced by any of Metropolitan's member agencies, water retailers or other local agencies within

Metropolitan's service area (including supplies from projects participating in Metropolitan's Local Projects Program).

(r) "Made Available," "Make Available" or "Making Available." As used herein, Conserved Water and Canal Lining Water will be deemed to have been Made Available to Metropolitan when (1) such water has been transferred to SDCWA pursuant to the Transfer Agreement and/or allocated to SDCWA pursuant to the Allocation Agreement, (2) valid and continuing authorization has been given by the Bureau legally entitling Metropolitan to divert, for the Year in question, Conserved Water and/or Canal Lining Water at the SDCWA Point of Transfer, in addition to the water that Metropolitan is otherwise authorized to divert from the Colorado River, and (3) all other necessary legal rights, entitlements, approvals and permissions, under the laws of the United States and the State of California for diversions from the Colorado River by Metropolitan, if any, have been obtained and are in full force and effect. "Make Available" and "Making Available" are grammatical variations of "Made Available."

(s) Metropolitan Point(s) of Delivery is as defined in Paragraph 3.5(b).

(t) "Price" means the applicable amount to be paid per acre-foot of Exchange Water delivered by Metropolitan to SDCWA at the Metropolitan Point(s) of Delivery under this Agreement.

(u) "Price Dispute" is as defined in Paragraph 11.1.

(v) "SDCWA Point of Transfer" is as defined in Paragraph 3.5(a).

(w) "Secretary" means the United States Secretary of the Interior.

(x) "Termination Date" means the termination date determined under Paragraph 7.1, subject to the provisions of Paragraph 7.2.

(y) "Transfer Agreement" is as defined in Recital D, subject to modification to the extent provided in Paragraph 13.13 hereof.

(z) "Treated Exchange Water" means Exchange Water that has been treated by filtration and disinfection at a Metropolitan water filtration facility for direct delivery to SDCWA.

(aa) "Treatment Surcharge" means the rate(s), charge(s) and/or other fee(s) as determined pursuant to the Administrative Code for the provision of treated water service.

(bb) "Year" means the period commencing on the Effective Date and ending on the immediately following December 31 (the first (1st) Year), and each consecutive calendar year thereafter during the term of this Agreement.

1.2 Rules of Construction.

(a) Unless the context clearly requires otherwise:

- (i) The plural and singular forms include the other;
- (ii) "Shall," "will," "must," and "agrees" are each mandatory;
- (iii) "May" is permissive;
- (iv) "Or" is not exclusive;
- (v) "Includes" and "including" are not limiting; and
- (vi) "Between" includes the ends of the identified range.

(b) Headings at the beginning of Paragraphs and subparagraphs of this Agreement are solely for the convenience of the Parties, are not a part of this Agreement and shall not be used in construing it.

(c) The masculine gender shall include the feminine and neuter genders and vice versa.

(d) The word "person" shall include individual, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture, governmental authority, water district and other entity of whatever nature, except either Metropolitan or SDCWA or an officer or employee thereof.

(e) Reference to any agreement (including this Agreement), document, or instrument means such agreement, document, instrument as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof.

(f) Except as specifically provided herein, reference to any law, statute, ordinance, regulation or the like means such law as amended, modified, codified or reenacted, in whole or in part, and in effect from time to time, including any rules and regulations promulgated thereunder.

II

REPRESENTATIONS AND WARRANTIES

2.1 Representations and Warranties of Metropolitan. As a material inducement to SDCWA to enter into this Agreement, Metropolitan represents and warrants as follows:

(a) Metropolitan is a metropolitan water district, duly organized, validly existing and in good standing under the laws of the State of California, and subject to satisfaction of Metropolitan's conditions precedent, as set forth in Paragraph 8.1 hereof, Metropolitan has all necessary power and authority to perform its obligations hereunder on the terms set forth in this Agreement, and the execution and delivery hereof by Metropolitan and the performance by Metropolitan of its obligations hereunder will not violate or constitute an event of default under the terms or provisions of any agreement, document or instrument to which Metropolitan is a party or by which Metropolitan is bound.

(b) Subject to the satisfaction of Metropolitan's conditions precedent, as set forth in Paragraph 8.1 hereof, this Agreement is a valid and binding obligation of Metropolitan, enforceable in accordance with its terms, subject to the requirements of applicable law.

2.2 Representations and Warranties of SDCWA. As a material inducement to Metropolitan to enter into this Agreement, SDCWA represents and warrants as follows:

(a) SDCWA is a county water authority, duly organized, validly existing and in good standing under the laws of the State of California, and subject to satisfaction of

SDCWA's conditions precedent as set forth in Paragraph 8.2 hereof, SDCWA has all necessary power and authority to perform its obligations hereunder on the terms set forth in this Agreement, and the execution and delivery hereof by SDCWA and the performance by SDCWA of its obligations hereunder will not violate or constitute an event of default under the terms or provisions of any agreement, document or instrument to which SDCWA is a party or by which SDCWA is bound.

(b) Subject to the satisfaction of SDCWA's conditions precedent, as set forth in Paragraph 8.2, this Agreement is a valid and binding obligation of SDCWA enforceable in accordance with its terms, subject to the requirements of applicable law.

(c) SDCWA will have obtained such approvals and permissions as may be necessary, under applicable laws of the United States and the State of California, to Make Available to Metropolitan Conserved Water and Canal Lining Water pursuant to this Agreement.

III

QUANTITY, DELIVERY AND SCHEDULING

3.1 Conserved Water and Canal Lining Water.

(a) SDCWA will Make Available the Conserved Water and/or the Canal Lining Water to Metropolitan at the SDCWA Point of Transfer each Year, in the manner set forth below. The quantity of Conserved Water and/or Canal Lining Water Made Available to Metropolitan by SDCWA at the SDCWA Point of Transfer each Year shall be the lesser of: (1) the sum of the quantity of water which IID transfers to SDCWA

under the Transfer Agreement in such Year and the quantity of Canal Lining Water allocated to SDCWA under the Allocation Agreement in such Year; or (2) 277,700 acre feet. The Conserved Water and/or the Canal Lining Water Made Available in each Year shall be deemed to have been Made Available to Metropolitan in monthly installments, with one-twelfth (1/12) of such water deemed to have been Made Available in each calendar month of such Year (provided that, in the first Year, the quantity of such water deemed to have been Made Available in each month shall be determined by dividing the total quantity for that Year by the number of calendar months or portions thereof in that Year).

(b) SDCWA will also Make Available to Metropolitan, in the manner set forth in subparagraph (a) above, the Early Transfer Water, in three annual installments as follows:

In calendar year 2020	2,500 acre-feet
In calendar year 2021	5,000 acre-feet
In calendar year 2022	2,500 acre-feet

(c) SDCWA will provide to Metropolitan annual written notice by November 1st each Year (or, in the case of the first Year, reasonable advance written notice) of the quantity of Conserved Water (including Early Transfer Water, if applicable) to be transferred to SDCWA in accordance with the Transfer Agreement, and of the quantity of Canal Lining Water to be allocated to SDCWA in accordance with the Allocation Agreement, and in each case to be Made Available to Metropolitan at the

SDCWA Point of Transfer during the immediately following Year. The Conserved Water and/or the Canal Lining Water will be Made Available to Metropolitan by SDCWA in a manner consistent with the Bureau's operations schedule and will be measured as provided in Paragraph 3.4.

3.2 Exchange Water.

(a) Provided that the Conserved Water (including Early Transfer Water, if applicable) and/or the Canal Lining Water has been Made Available to Metropolitan at the SDCWA Point of Transfer pursuant to Paragraph 3.1, Metropolitan shall deliver Exchange Water (including Early Exchange Water, if applicable) to SDCWA at the Metropolitan Point(s) of Delivery, in compliance with this Agreement, and in the manner and to the extent set forth below. In any Year, Metropolitan will not be required to deliver an amount of Exchange Water that is greater than the aggregate amount of Conserved Water (including Early Transfer Water, if applicable) and Canal Lining Water Made Available to Metropolitan in that Year pursuant to Paragraph 3.1, subject to the provisions of subparagraphs (b) and (c) of Paragraph 7.2.

(b) Metropolitan's delivery of Exchange Water at the Metropolitan Point(s) of Delivery shall be governed by its rules and regulations for delivery of water set forth in Chapter 5 of Division IV of the Administrative Code in the same manner as other water delivered by Metropolitan, except as may otherwise be provided in this Agreement.

(c) The Exchange Water to be delivered in any Year shall be delivered in approximately equal monthly installments over the Year so that at the end of the twelfth

month the aggregate quantity of Exchange Water delivered by Metropolitan will be equal to the aggregate quantity of Conserved Water (including Early Transfer Water, if applicable) and Canal Lining Water Made Available to Metropolitan at the SDCWA Point of Transfer for that Year, or at the times and in the amounts as the Parties may otherwise agree.

(d) In the event that the delivery of Exchange Water to the Metropolitan Point(s) of Delivery is temporarily suspended or interrupted during any Year pursuant to Paragraph 3.3 below, the remaining quantity of Exchange Water to be delivered for such Year will be delivered by Metropolitan ratably over the remainder of such Year or as otherwise agreed by the Parties.

(e) Metropolitan shall have the right to deliver Exchange Water utilizing such facilities and by such delivery path as shall be determined by Metropolitan at its sole discretion. Utilization of a particular delivery path for any such delivery shall not operate as or be deemed to be a commitment to utilize the same delivery path for any future delivery. Metropolitan has not dedicated and shall not be deemed or construed to have dedicated any particular facilities for delivery of the Exchange Water.

3.3 Temporary Shutdown of Metropolitan Facilities. Metropolitan's Chief Executive Officer shall have the right to control, curtail, interrupt or suspend the delivery of Exchange Water to SDCWA in accordance with the Administrative Code. SDCWA understands that any number of factors, including emergencies, inspection, maintenance or repair of Metropolitan facilities or the State Water Project facilities, may result in a temporary and incidental

modification of the delivery schedule contemplated in Paragraph 3.2. Metropolitan shall notify SDCWA of any control, curtailment, interruption or suspension of delivery of Exchange Water in accordance with and to the extent set forth in the Administrative Code, as if the Exchange Water were water served by Metropolitan. Metropolitan agrees that delivery of Exchange Water shall be resumed as soon as possible following any such curtailment, interruption or suspension of delivery. Unless Metropolitan is otherwise relieved of its obligations under the provisions of this Agreement, a curtailment, interruption or suspension of the delivery of Exchange Water pursuant to this Paragraph 3.3 shall not change the amount of Exchange Water Metropolitan is obligated to deliver during any Year.

3.4 Measurement of Deliveries. The quantity of Exchange Water delivered in each Year by Metropolitan at the applicable Metropolitan Point(s) of Delivery, which amount will be metered at such Point(s) of Delivery as provided in the Administrative Code, shall be equal to the aggregate quantity of Conserved Water (including Early Transfer Water, if applicable) and Canal Lining Water Made Available to Metropolitan in such Year at the SDCWA Point of Transfer. The Parties agree that they will be bound by such meter readings.

3.5. Points of Transfer or Delivery.

(a) The SDCWA Point of Transfer. As used herein, the “SDCWA Point of Transfer” shall be Metropolitan’s intake at Lake Havasu.

(b) The Metropolitan Point(s) of Delivery. As used herein, the “Metropolitan Point(s) of Delivery” shall be any or all San Diego Pipelines One through Five (inclusive)

or at similar facilities that may be constructed in the future at a point near the San Luis Rey River in Northern San Diego County.

3.6 Quality of Exchange Water. Metropolitan in its sole discretion shall have the right to deliver Exchange Water of a quality which exceeds the quality of the Conserved Water and/or Canal Lining Water which Metropolitan receives, and such Exchange Water shall fully satisfy Metropolitan's obligation to deliver Exchange Water of like quality to such Conserved Water and Canal Lining Water. In such event, Metropolitan's election shall not operate as or be construed to be a commitment to deliver Exchange Water of better quality in the future, and in no event shall SDCWA be deemed to have any right to receive Exchange Water of better quality than the Conserved Water and/or Canal Lining Water.

3.7 Alternative Facilities. SDCWA may determine, in its sole discretion, permanently to reduce the aggregate quantity of Conserved Water and Canal Lining Water to be Made Available to Metropolitan under this Agreement to the extent SDCWA decides continually and regularly to transport Conserved Water and/or Canal Lining Water in an amount equal to such reduction in quantity to San Diego County through Alternative Facilities; provided, however, that SDCWA shall furnish to Metropolitan a minimum of five (5) years' advance written notice of such determination. The written notice shall confirm the quantity of Conserved Water and/or Canal Lining Water (if any) which SDCWA will continue to Make Available to Metropolitan. If SDCWA exercises its right under this Paragraph 3.7, Metropolitan's obligation to deliver Exchange Water shall be limited to that specified quantity of Conserved Water and/or

Canal Lining Water that SDCWA continues to Make Available to Metropolitan pursuant to this Agreement.

IV.

CHARACTERIZATION OF EXCHANGE WATER

4.1 Exchange Water as an Independent Local Supply. The Exchange Water shall be characterized for the purposes of all of Metropolitan's ordinances, plans, programs, rules and regulations, including any then-effective Drought Management Plan, and for calculation of any Readiness-to-Serve Charge share, in the same manner as the Local Water of other Metropolitan member agencies, except as provided in Paragraphs 4.2 and 5.2.

4.2 Exception for Interim Agricultural Water Program and Determination of Price. Notwithstanding the provisions of Paragraph 4.1, the Exchange Water delivered to SDCWA shall be characterized as Metropolitan water and not as Local Water only for the limited purposes of Paragraph 5.2 and the Interim Agricultural Water Program.

V.

PRICING AND PAYMENTS

5.1 Payments. SDCWA shall pay the Price for each acre-foot of Exchange Water (including Early Exchange Water, if applicable) delivered by Metropolitan at the Metropolitan Point(s) of Delivery.

5.2 The Price. The Price on the date of Execution of this Agreement shall be Two Hundred Fifty Three Dollars (\$253.00). Thereafter, the Price shall be equal to the charge or charges set by Metropolitan's Board of Directors pursuant to applicable law and regulation and

generally applicable to the conveyance of water by Metropolitan on behalf of its member agencies. For the term of this Agreement, neither SDCWA nor Metropolitan shall seek or support in any legislative, administrative or judicial forum, any change in the form, substance or interpretation of any applicable law or regulation (including the Administrative Code) in effect on the date of this Agreement and pertaining to the charge or charges set by Metropolitan's Board of Directors and generally applicable to the conveyance of water by Metropolitan on behalf of its member agencies; provided, however, that Metropolitan may at any time amend the Administrative Code in accordance with Paragraph 13.12, and the Administrative Code as thereby amended shall be included within the foregoing restriction; and, provided, further, that (a) after the conclusion of the first five (5) Years, nothing herein shall preclude SDCWA from contesting in an administrative or judicial forum whether such charge or charges have been set in accordance with applicable law and regulation; and (b) SDCWA and Metropolitan may agree in writing at any time to exempt any specified matter from the foregoing limitation. In the event that SDCWA contests a matter pursuant to the foregoing sentence, the prevailing Party shall be entitled to recovery of reasonable costs and attorneys fees incurred in prosecuting or defending against such contest.

5.3 Billing and Payments. Metropolitan shall mail monthly invoices to SDCWA in accordance with the Administrative Code, and SDCWA shall make monthly payments of amounts due pursuant to Paragraph 5.1 in accordance with the Administrative Code. The amount of each monthly billing and payment pursuant to this Agreement shall be the quantity in acre-feet of Exchange Water to be delivered by Metropolitan at the Metropolitan Point(s) of

Delivery during the applicable Year, multiplied by the Price as of the commencement of that Year, divided by twelve (12).

5.4 Treatment Surcharge. SDCWA shall pay to Metropolitan an amount equal to the Treatment Surcharge, in addition to the Price, for each acre-foot of Treated Exchange Water.

VI.

ADDITIONAL NOTIFICATIONS

6.1 Confirmation of Water Conservation. SDCWA will provide a written report to Metropolitan, prior to March 31 of each Year, describing the method by which any Conserved Water (including Early Transfer Water, if applicable) that was Made Available to Metropolitan in the prior Year was conserved by IID, including a description of conservation projects resulting in the Conserved Water and the quantity of Conserved Water conserved by each project.

6.2 Notice of Developments.

(a) After the Effective Date, SDCWA agrees to give prompt notice to Metropolitan if it discovers that any of its own representations and warranties herein were untrue when made or determines that any of its own representations and warranties will be untrue as of any date during the term of this Agreement.

(b) After the Effective Date, Metropolitan agrees to give prompt notice to SDCWA if it discovers that any of its own representations and warranties herein were untrue when made or determines that any of its own representations and warranties will be untrue as of any date during the term of this Agreement.

VII.

TERM

7.1 Commencement and Expiration. This Agreement shall become effective on the Effective Date and shall expire on the Termination Date, which shall be the later of the dates determined pursuant to subparagraph (a) and (b) below.

(a) Metropolitan's and SDCWA's rights and obligations under this Agreement pertaining to Conserved Water Made Available to Metropolitan pursuant to the Transfer Agreement and this Agreement shall expire and shall thereupon terminate on December 31 of the thirty-fifth (35th) Year, unless SDCWA elects by written Notice to Metropolitan no later than the end of the fifteenth (15th) Year to extend this Agreement to December 31 of the forty-fifth (45th) Year, or shall terminate as otherwise provided in Paragraph 7.2.

(b) Metropolitan's and SDCWA's rights and obligations under this Agreement pertaining to the Canal Lining Water shall expire and shall thereupon terminate on December 31 of the same Year in which the Allocation Agreement terminates, or shall terminate as otherwise provided in Paragraph 7.2.

7.2 Force Majeure.

(a) If the performance, in whole or in part, of the obligations of the respective Parties, or either of them, to Make Available Conserved Water or Canal Lining Water or to deliver Exchange Water (as the case may be) under this Agreement is prevented: by acts or failure to act of any agency, court or other government authority, or any other

person; by natural disaster (such as earthquake, fire, drought or flood), contamination or outbreak of a water borne disease, war, strikes, lockouts, act of God, or acts of civil or military authority; by the operation of applicable law; or by any other cause beyond the control of the affected Party or Parties, whether similar to the causes specified herein or not, then, in any such circumstance, the obligation of the affected Party or Parties to cause the delivery of the Conserved Water or Canal Lining Water or to deliver the Exchange Water (as the case may be) under this Agreement shall be suspended from the time and to the extent that the performance thereof is prevented, but reasonable diligence shall be observed by the affected Party or Parties, so far as it lies in their power, in performing such respective obligations in whole or in part under this Agreement. In the event such performance of either of the Parties under this Agreement is prevented as described above, then during the period of such prevention, performance by the non-affected Party under this Agreement shall be excused until such prevention ceases, at which time both the Parties shall become obligated to resume and continue performance of their respective obligations hereunder during the term of this Agreement.

Notwithstanding the foregoing, no such prevention shall suspend or otherwise affect any payment obligations for Exchange Water actually delivered or any obligation of either Party to indemnify the other pursuant to Paragraph 13.10, or shall extend the term of this Agreement beyond the Termination Date, except as provided in Paragraph 7.2(c) below.

(b) In the event the performance by Metropolitan or SDCWA is prevented as described above, the Parties agree actively to cooperate and use their reasonable best

efforts, without diminution of any storage or other rights Metropolitan or SDCWA may have, to support a request to the Bureau for emergency storage in Lake Mead or Lake Havasu for the Conserved Water and/or the Canal Lining Water, if it would avoid the waste or loss of the Conserved Water and/or the Canal Lining Water.

(c) In the event the delivery of Exchange Water by Metropolitan is prevented as described in Paragraph 7.2(a) above, and in the event Conserved Water and/or the Canal Lining Water has been stored as contemplated by Paragraph 7.2(b) above, and such stored Conserved Water and/or the Canal Lining Water is Made Available to Metropolitan, the term of this Agreement shall be extended, for a period not to exceed five Years, without the necessity for further action by either Party, if and to the extent necessary to permit Metropolitan to complete the delivery of Exchange Water in a quantity equal to such stored Conserved Water and/or the Canal Lining Water.

7.3 Survival. Notwithstanding the foregoing or anything to the contrary in this Agreement, any remaining payment obligation of SDCWA under Article V, and the provisions in Paragraphs 12.5, 13.2, 13.3, 13.8, 13.10 and 13.15 and Articles X and XI, shall survive the termination of this Agreement.

VIII.

CONDITIONS PRECEDENT

8.1 Metropolitan's Condition Precedent. Metropolitan's obligations under this Agreement are subject to the execution and delivery of the QSA and the Related Agreements (as defined in Section 1.1 of the QSA), and to the occurrence of the Effective Date.

8.2 SDCWA's Conditions Precedent. SDCWA's obligations under this Agreement are subject to the execution and delivery of the Revised Fourth Amendment to the Transfer Agreement, the Allocation Agreement and the Implementation Agreement, and to the occurrence of the Effective Date.

8.3 Failure of Conditions. If Metropolitan's conditions precedent under Paragraph 8.1 are not satisfied or waived in writing by Metropolitan, or if SDCWA's conditions precedent under Paragraph 8.2 are not satisfied or waived in writing by SDCWA, in each case on or before December 31, 2003, then this Agreement will be void, and all rights and obligations provided hereunder will be terminated.

IX.

COMPLIANCE WITH APPLICABLE LAWS

9.1 Applicable Laws. This Agreement and the activities described herein are contingent upon and subject to compliance with all applicable laws.

X.

ADDITIONAL COVENANTS

10.1 Impact on Transfer Agreement. Nothing in this Agreement shall be construed to amend the Transfer Agreement.

10.2 Implementation of Transfer Agreement. Insofar as the Transfer Agreement is consistent with and implemented in accordance with state and federal law and the California Plan, Metropolitan shall not oppose approval or implementation of that Agreement before the

California State Water Resources Control Board, the Bureau, the United States Department of the Interior or in any other judicial or administrative proceedings

10.3 Support for Surplus Criteria. SDCWA will use reasonable best efforts to support all reasonable efforts by Metropolitan to promote and secure surplus criteria on the Colorado River with the objective of maintaining a full Colorado River Aqueduct.

10.4 Report to Legislature. The Parties shall report as requested to the Legislature of the State of California on the implementation of this Agreement.

10.5 Covenants of Good Faith. This Agreement is subject to reciprocal obligations of good faith and fair dealing.

10.6 SDCWA Consent and Waiver. Notwithstanding any limitations set forth in the Transfer Agreement otherwise restricting IID's right to transfer water to Metropolitan, SDCWA hereby consents to IID's transfer of water to Metropolitan as provided in Articles 5 and 6 of the IID/MWD Acquisition Agreement (as defined in Section 1.1 of the QSA) and waives any right to object thereto. SDCWA shall provide to IID, and shall be bound by, a written acknowledgement of its consent and waiver set forth in the preceding sentence above in such form and to such effect as Metropolitan may reasonably request.

10.7 Allocation Agreement Responsibilities. SDCWA shall indemnify Metropolitan and defend and hold it harmless at SDCWA's sole cost and expense from and against any obligation, liability or responsibility of any kind assigned to SDCWA under and pursuant to the Allocation Agreement and any claim by any person that MWD has any continuing obligation,

liability or responsibility of any kind with respect to the matters assigned to SDCWA under the Allocation Agreement.

XI.

DISPUTE RESOLUTION

11.1 Reasonable Best Efforts to Resolve by Negotiation. The Parties shall exercise reasonable best efforts to resolve all disputes, including Price Disputes, arising under this Agreement through negotiation; provided, however, that SDCWA shall not dispute whether the Price determined pursuant to Paragraph 5.2 for the first five (5) Years of this Agreement was determined in accordance with applicable law or regulation (a "Price Dispute"). In the event negotiation is unsuccessful, then the Parties reserve their respective rights to all legal and equitable remedies.

XII.

EVENTS OF DEFAULT; REMEDIES

12.1 Events of Default by SDCWA. Each of the following constitutes an "Event of Default" by SDCWA under this Agreement if not cured within 30 days of receiving written notice from Metropolitan of such matter:

- (a) Subject to Paragraphs 7.2 and 9.1, SDCWA fails to Make Available to Metropolitan Conserved Water or Canal Lining Water, as required under this Agreement.
- (b) SDCWA fails to perform or observe any other term, covenant or undertaking that it is to perform or observe under this Agreement.

(c) Any representation, warranty or statement made by or on behalf of the SDCWA and contained in this Agreement or in any exhibit, certificate or other document furnished pursuant to this Agreement is on the date made or later proves to be false, misleading or untrue in any material respect.

12.2 Events of Default by Metropolitan. Each of the following constitutes an “Event of Default” by Metropolitan under this Agreement if not cured within 30 days of receiving written notice from SDCWA of such matter:

(a) Subject to Paragraphs 7.2 and 9.1, Metropolitan fails to deliver the Exchange Water as required under this Agreement.

(b) Metropolitan fails to perform or observe any other term, covenant or undertaking that it is to perform or observe under this Agreement.

(c) Any representation, warranty or statement made by or on behalf of Metropolitan and contained in this Agreement or in any exhibit, certificate or other document furnished pursuant to this Agreement is on the date made or later proves to be false, misleading or untrue in any material respect.

12.3 Remedies Generally. If an Event of Default occurs, the non-breaching Party will have all rights and remedies provided at law or in equity against the breaching Party.

12.4 Enforcement of Transfer and Exchange Obligations.

(a) Any Event of Default as defined in Paragraph 12.1(a) or 12.2(a) may be remedied by an order of specific performance.

(b) So long as no Event of Default as defined in Paragraph 12.1(a) has occurred and is continuing, and so long as SDCWA tenders to Metropolitan full payment of the Agreement Price when due, Metropolitan shall not suspend or delay, in whole or in part, delivery of Exchange Water as required under this Agreement on account of any breach, or alleged breach, by SDCWA unless first authorized to do so by a final judgment. So long as no Event of Default as defined in Paragraph 12.2(a) has occurred and is continuing, SDCWA shall not suspend or delay, in whole or in part, Making Available Conserved Water and/or Canal Lining Water as required under this Agreement on account of any breach, or alleged breach, by Metropolitan unless first authorized to do so by a final judgment. A violation of the provisions of this subparagraph (b) may be remedied by an order of specific performance.

(c) In the event of a dispute over the Price, SDCWA shall pay when due the full amount claimed by Metropolitan; provided, however, that, during the pendency of the dispute, Metropolitan shall deposit the difference between the Price asserted by SDCWA and the Price claimed by Metropolitan in a separate interest bearing account. If SDCWA prevails in the dispute, Metropolitan shall forthwith pay the disputed amount, plus all interest earned thereon, to SDCWA. If Metropolitan prevails in the dispute, Metropolitan may then transfer the disputed amount, plus all interest earned thereon, into any other fund or account of Metropolitan.

12.5 Cumulative Rights and Remedies. The Parties do not intend that any right or remedy given to a Party on the breach of any provision under this Agreement be exclusive; each

such right or remedy is cumulative and in addition to any other remedy provided in this Agreement or otherwise available at law or in equity. If the non-breaching Party fails to exercise or delays in exercising any such right or remedy, the non-breaching Party does not thereby waive that right or remedy. In addition, no single or partial exercise of any right, power, or privilege precludes any other or further exercise of a right, power, or privilege granted by this Agreement or otherwise.

12.6. Action or Proceeding Between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to

- (a) being transferred to a "Neutral County," or instead
- (b) having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding.

(c) A "Neutral County" is any county other than Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego or Ventura. In the event an action is filed by either party against the other to enforce this Agreement and to obtain damages for its alleged breach, each Party hereby:

- (i) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action;

- (ii) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;
- (iii) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and
- (iv) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

(d) Nothing in this Paragraph 12.6, however, impairs or limits the ability of a Party to contest the suitability of any particular county to serve as a Neutral County, or operates to waive any other rights.

XIII.

GENERAL PROVISIONS

13.1 No Third-Party Rights. This Agreement is made solely for the benefit of the Parties and their respective permitted successors and assigns (if any). Except for such a permitted successor or assign, no other person or entity may have or acquire any right by virtue of this Agreement.

13.2 Ambiguities. Each Party and its counsel have participated fully in the drafting, review and revision of this Agreement. A rule of construction to the effect that ambiguities are to be resolved against the drafting Party will not apply in interpreting this Agreement, including any amendments or modifications.

13.3 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to conflict of laws provisions; provided, however, that federal law shall be applied as appropriate to the extent it bears on the resolution of any claim or issue relating to the permissibility of the transfers or the Making Available of Colorado River water, as contemplated herein.

13.4 Binding Effect; No Assignment. This Agreement is and will be binding upon and will inure to the benefit of the Parties and, upon dissolution, the legal successors and assigns of their assets and liabilities. Neither Party may assign any of its rights or delegate any of its duties under this Agreement. Any assignment or delegation made in violation of this Agreement is void and of no force or effect.

13.5 Notices. All notices, requests, demands, or other communications under this Agreement must be in writing, and sent to both addresses of each Party. Notice will be sufficiently given for all purposes as follows:

- *Personal Delivery.* When personally delivered to the recipient. Notice is effective on delivery.
- *First-Class Mail.* When mailed first-class, postage prepaid, to the last address of the recipient known to the Party giving notice. Notice is effective five mail delivery days after it is deposited in a United States Postal Service office or mailbox.
- *Certified Mail.* When mailed certified mail, return receipt requested. Notice is effective on receipt, if a return receipt confirms delivery.

- *Overnight Delivery.* When delivered by an overnight delivery service such as Federal Express, charges prepaid or charged to the sender's account. Notice is effective on delivery, if delivery is confirmed by the delivery service.
- *Facsimile Transmission.* Notice is effective on receipt, provided that a copy is mailed by first-class mail on the facsimile transmission date.

Addresses for purpose of giving notice are as follows:

To Metropolitan: **Metropolitan Water District of Southern California**

Attn.: Chief Executive Officer

Address for U.S. mail: P.O. Box 54153

Los Angeles, CA 90054-0153

Address for personal or overnight delivery:

700 North Alameda Street

Los Angeles, CA 90012-2944

Telephone: 213-217-6000

Fax: 213-217-6950

With a copy delivered by the same means and at the same address to:

Metropolitan Water District of Southern California

Attn.: General Counsel

To SDCWA:

San Diego County Water Authority

Attn.: General Manager

4677 Overland Avenue
San Diego, California 92123-1233
Telephone: 858-522-6780
Fax: 858-522-6262

With a copy to:

San Diego County Water Authority
Attn.: General Counsel
4677 Overland Avenue
San Diego, California 92123-1233
Telephone: 858-522-6790
Fax: 858-522-6566

(a) A correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission by the Party to be notified will be deemed effective as of the first date that notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

(b) A Party may change its address by giving the other Party notice of the change in any manner permitted by this Agreement.

13.6 Entire Agreement. This Agreement constitutes the final, complete, and exclusive statement of the terms of the Agreement between the Parties pertaining to its subject matter and supersedes all prior and contemporaneous understandings or agreements of the Parties. Neither Party has been induced to enter into this Agreement by, nor is either Party relying on, any representation or warranty outside those expressly set forth in this Agreement.

13.7 Time of the Essence. If the day on which performance of any act or the occurrence of any event hereunder (except the delivery of Exchange Water) is due is not a business day, the time when such performance or occurrence shall be due shall be the first business day (as defined in Section 4507 of the Administrative Code) occurring after the day on which performance or occurrence would otherwise be due hereunder. All times provided in this Agreement for the performance of any act will be strictly construed, time being of the essence of this Agreement.

13.8 Modification. This Agreement may be supplemented, amended, or modified only by the written agreement of the Parties. No supplement, amendment, or modification will be binding unless it is in writing and signed by both Parties.

13.9 Waiver. No waiver of a breach, failure of condition, or any right or remedy contained in or granted by the provisions of this Agreement is effective unless it is in writing and signed by the Party waiving the breach, failure, right, or remedy. No waiver of a breach, failure of condition, or right or remedy is or may be deemed a waiver of any other breach, failure, right or remedy, whether similar or not. In addition, no waiver will constitute a continuing waiver unless the writing so specifies.

13.10 Indemnification.

(a) SDCWA shall indemnify Metropolitan pursuant to Section 4502 of the Administrative Code against liability in connection with acts of SDCWA after Metropolitan's delivery of the Exchange Water, to the same extent as is required with respect to water supplied by Metropolitan to a member public agency. Such

indemnification shall be in addition to any indemnification rights available under applicable law and to any other remedy provided under this Agreement.

(b) Metropolitan shall indemnify SDCWA pursuant to Section 4502 of the Administrative Code against liability in connection with Metropolitan's delivery of the Exchange Water to the same extent as is required with respect to water supplied by Metropolitan to a member public agency. Such indemnification shall be in addition to any indemnification rights available under applicable law and to any other remedy provided under this Agreement.

(c) Notwithstanding anything in this Agreement to the contrary, each Party agrees to proceed with reasonable diligence and use reasonable good faith efforts to jointly defend any lawsuit or administrative proceeding by any person other than the Parties challenging the legality, validity, or enforceability of this Agreement.

13.11 Authority of the Legislature. Nothing in this Agreement will limit any authority of the Legislature of the State of California to allocate or reallocate water.

13.12 Right to Amend the Administrative Code. Notwithstanding anything to the contrary in this Agreement, express or implied, Metropolitan shall have the right to amend the Administrative Code at its sole discretion, except that, for the purposes of this Agreement, no such amendment shall have the effect of changing or modifying Paragraphs 8.1 and 8.2, or the obligation of Metropolitan to deliver Exchange Water hereunder, unless such effect is first approved by the Board of Directors of SDCWA.

13.13 Right to Amend Transfer Agreement and Allocation Agreement.

Notwithstanding anything to the contrary in this Agreement, express or implied, SDCWA shall have the right to amend the Transfer Agreement and/or the Allocation Agreement at its sole discretion, except that, for purposes of this Agreement, no such amendment shall have the effect of changing or modifying Paragraphs 8.1 and 8.2, the obligation of SDCWA to Make Available Conserved Water and/or Canal Lining Water hereunder, or the Price payable by SDCWA with respect to any Exchange Water, or be binding on Metropolitan, unless such effect is first approved by the Board of Directors of Metropolitan.

13.14 Counterparts. This Agreement may be executed in two or more counterparts, each of which, when executed and delivered, shall be an original and all of which together shall constitute one instrument, with the same force and effect as though all signatures appeared on a single document.

13.15 Audit. Each Party shall be responsible for assuring the accuracy of its books, records and accounts of billings, payments, metering of water, and other records (whether on hard copy or in electronic or other format) evidencing the performance of its obligations pursuant to this Agreement and shall maintain all such records for not less than three years. Each Party will have the right to audit the other Party's books and records relating to this Agreement for purposes of determining compliance with this Agreement during the term hereof and for a period of three years following termination of this Agreement. Upon reasonable notice, each Party shall

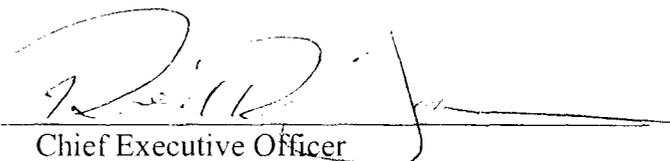
cooperate fully with any such audit and shall permit access to its books, records and accounts as may be necessary to conduct such audit.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first written above.

Approved as to Form:

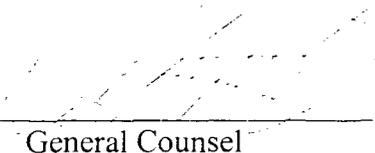
The Metropolitan Water District of Southern California

By: 
General Counsel

By: 
Chief Executive Officer

Approved as to Form:

The San Diego County Water Authority

By: 
General Counsel

By: 
General Manager

**AGREEMENT FOR THE CONVEYANCE OF WATER
AMONG
THE SAN DIEGO COUNTY WATER AUTHORITY,
THE SAN LUIS REY SETTLEMENT PARTIES, AND
THE UNITED STATES**

This Agreement is entered into as of the 10th day of October, 2003, among the San Diego County Water Authority, a county water authority organized and incorporated under the County Water Authority Act of the State of California, hereinafter referred to as "SDCWA;" the United States of America acting by and through its Secretary of the Interior ("Secretary"), hereinafter referred to as "United States;" the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, acting through the governing bodies of each respective Band as duly recognized by the Secretary, hereinafter referred to as "Indian Bands;" the San Luis Rey River Indian Water Authority, a permanent intertribal entity established pursuant to duly adopted ordinances of the Indian Bands recognized and approved by Public Law 100-675, hereinafter referred to as "Indian Water Authority;" the City of Escondido, a city organized under the provisions of the general laws of the State of California, hereinafter referred to as "Escondido;" and the Vista Irrigation District, an irrigation district organized and incorporated under the Irrigation District Law of the State of California, hereinafter referred to as "Vista." Each of the above is sometimes referred to individually as "Party," and all of the above are sometimes collectively referred to as "Parties."

DEFINITIONS

1. "All American Canal Lining Project" means that portion of the works authorized in Title II of Public Law 100-675 which will result in a lined All American Canal from one mile west of Pilot Knob to Drop 3 – a distance of approximately 23 miles.
2. "Allocation Agreement" means the agreement entered into by the Secretary and others to allocate the water conserved from the All American Canal Lining Project and the Coachella Canal Lining Project.
3. "SDCWA" means the San Diego County Water Authority.
4. "Coachella Canal Lining Project" means that portion of the works authorized in Title II of Public Law 100-675 which will result in a lined Coachella Branch of the All American Canal from Siphons 7 to 32 – a distance of approximately 34.6 miles.
5. "Escondido" means the City of Escondido.

AGREEMENT FOR CONVEYANCE OF WATER

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6. "Indian Bands" means the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, acting through the governing bodies of each respective Band as duly recognized by the Secretary.

7. "Indian Water Authority" means the San Luis Rey River Indian Water Authority, a permanent intertribal entity pursuant to duly adopted ordinances recognized and approved by Public Law 100-675.

8. "Local Entities" means Escondido and Vista.

9. "Local Water" means locally produced water developed by facilities owned and operated by Escondido and Vista in the watershed of the San Luis Rey River upstream from the Escondido Canal.

10. "Metropolitan" means The Metropolitan Water District of Southern California, a metropolitan water district organized and incorporated under the Metropolitan Water District Act of the State of California.

11. "Metropolitan's Treatment Charges" means the average amount charged by Metropolitan to its member public agencies for water treatment.

12. "Packard Amendment" means Section 211 of Public Law 106-377 Appendix B, 114 Stat.1441A-70.

13. "Reservations" means the reservations of the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians located in San Diego County, California.

14. "Secretary" means the Secretary of the Interior of the United States of America.

15. "Settlement Act" means Title I of Public Law 100-675, enacted on November 17, 1988, 102 Stat. 4000, Title I (as amended by section 117 of the Act of November 13, 1991, Public Law 102-154, 105 Stat. 990, 1012-1013; section 1017 of the Act of October 14, 1998, Public Law 105-256, 112 Stat. 1896, 1899; and Section 211 of the Act of October 27, 2000, 106 Public Law 377 Appendix B, 114 Stat. 1441A-70) and known more fully as the "San Luis Rey Indian Water Rights Settlement Act."

16. "Settlement Agreement" means the agreement referred to in Section 104 of the Settlement Act among the United States, Escondido, Vista, and the Indian Bands providing for the complete resolution of all claims, controversies, and issues involved in all of the pending proceedings in the United States District Court for the Southern District of California and before the Federal Energy Regulatory Commission.

17. "Settlement Parties" means the Indian Water Authority, the Indian Bands, and the Local Entities.

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18. "Supplemental Water" means water available for the benefit of the Settlement Parties under the Allocation Agreement, including water provided by Metropolitan pursuant to the certain Agreement Relating to Supplemental Water among The Metropolitan Water District of Southern California, the San Luis Rey Settlement Parties, and the United States dated October __, 2003.

19. "United States" means the United States of America acting by and through its Secretary of the Interior.

20. "Vista" means the Vista Irrigation District.

21. "Year" means calendar year.

EXPLANATORY RECITALS

- A. WHEREAS, the water in the San Luis Rey River, located in San Diego County, California, is insufficient to supply the needs of the Indian Bands and the Local Entities;
- B. WHEREAS, litigation involving the United States, the Indian Bands, and the Local Entities was commenced in Federal District Court to determine the rights of the Indian Bands and the Local Entities to the water of the San Luis Rey River, and a related contested proceeding was commenced among the same parties before the Federal Energy Regulatory Commission;
- C. WHEREAS, SDCWA is not a party to the pending litigation or the related proceeding before the Federal Energy Regulatory Commission;
- D. WHEREAS, pursuant to Title I of Public Law 100-675, enacted on November 17, 1988, the Congress of the United States passed the San Luis Rey Indian Water Rights Settlement Act to provide for the settlement of the disputes that were the subject of the above-referenced litigation and related proceeding;
- E. WHEREAS, pursuant to the Settlement Act, the United States was authorized to arrange for a supplemental water supply for the Settlement Parties of not more than 16,000 acre-feet per year from the following sources: (1) supplemental water which is developed from public lands within the State of California outside the service area of the Central Valley Project, (2) water conserved through projects to line portions of the All-American Canal and its Coachella Branch, authorized in Title II of said Public Law 100-675, and (3) water obtained through a contract with Metropolitan ;

AGREEMENT FOR CONVEYANCE OF WATER

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- F. WHEREAS, on October 27, 2000, Section 211 of Public Law 106-377 – Appendix B (the “Packard Amendment”) amended the Settlement Act by adding subsection 106(f), which directed the Secretary, in order to fulfill the trust responsibility to the Bands, acting through the Commissioner of Reclamation, to furnish annually to the San Luis Rey Settlement Parties in accordance with the Settlement Agreement: (1) a permanent supply of up to 16,000 acre-feet of the water conserved by lining certain unlined portions of the All-American Canal and its Coachella Branch; and (2) a permanent supply of power capacity and energy through a contract with the Yuma Area Contractors at no cost and at no further expense to the United States and the San Luis Rey Settlement Parties in an amount sufficient to convey the Settlement Parties’ portion of the conserved water from Lake Havasu through the Colorado River Aqueduct and to the places of use on the Bands’ reservations or in the service areas of Escondido and Vista;
- G. WHEREAS, the Parties anticipate that the Supplemental Water will become available incrementally, according to the Allocation Agreement, as certain unlined portions of the All American Canal and its Coachella Branch are lined;
- H. WHEREAS, the All-American Canal Lining Project and the Coachella Canal Lining Project are being constructed for the purpose of conserving water from the Colorado River which is now lost due to seepage, and as said projects are constructed, the Secretary will make water available pursuant to the Allocation Agreement;
- I. WHEREAS, the Parties also recognize that Section 106 of the Settlement Act provides that the Secretary may utilize existing programs and authorities to facilitate the development of water for the Settlement Parties;
- J. WHEREAS, the Parties recognize that arrangements with SDCWA and Metropolitan for exchange, acquisition, and conveyance of the Supplemental Water offer the most practical means for making the Supplemental Water available for the use by and benefit of the Settlement Parties, and, accordingly, all Parties have an interest in insuring the availability of the physical and economic infrastructure necessary to enable the use of the Supplemental Water developed under the Settlement Act;
- K. WHEREAS, the Parties wish to finalize a set of arrangements that provide SDCWA with equitable and sustainable consideration for its role in providing for the timely utilization of the Supplemental Water by the Settlement Parties;
- L. WHEREAS, the Parties are committed to achieving the completion of these efforts which will allow them to commit staff and resources to the remaining

AGREEMENT FOR CONVEYANCE OF WATER

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critical activities necessary to implement the All American Canal Lining Project, the Coachella Canal Lining Project and the Settlement Act;

- M. WHEREAS, all Parties recognize that the Settlement Parties have made significant contributions to the lining of the All American Canal and its Coachella Branch, and that the Department of the Interior has utilized and will continue to utilize its existing programs and authorities to promote mutually advantageous relationships among the Parties ; and
- N. WHEREAS, according to the Allocation Agreement and the Agreement Relating to Supplemental Water among the Metropolitan Water District of Southern California, the San Luis Rey Settlement Parties, and the United States, the United States has agreed to furnish Metropolitan with up to 16,000 acre-feet of Supplemental Water per year, some or all of which Metropolitan has agreed to exchange for a like quantity of water to be delivered to the United States for the benefit of the Settlement Parties at the delivery point or points for delivery of water from Metropolitan to SDCWA.

TERMS AND CONDITIONS

NOW THEREFORE, in consideration of the mutual covenants contained herein, SDCWA, the United States, the Indian Water Authority, the Bands, and the Local Entities agree to the conveyance of Supplemental Water in accordance with the following terms and conditions:

1. Term.

This Agreement shall commence on its effective date as defined in Section 25 and shall remain in effect for so long as Supplemental Water conserved by the All American Canal and Coachella Canal Lining Projects is available for use by the Settlement Parties.

2. Delivery Points of Supplemental Water to SDCWA.

The United States shall furnish all Supplemental Water to be conveyed by SDCWA at the delivery point or points for delivery of water from Metropolitan to SDCWA, or at such other locations as are mutually agreed by the Parties.

3. Conveyance of the Supplemental Water.

SDCWA shall convey the Supplemental Water furnished to it by the United States for use by the Settlement Parties, provided, however, that SDCWA shall not be obligated to convey such Supplemental Water at times when all of the available capacity in that portion of its facilities which is needed to convey the Supplemental Water is being used

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for the delivery of SDCWA's water to its member public agencies. Availability of capacity shall be determined by SDCWA at its reasonable discretion.

4. Payments to SDCWA for Conveying Supplemental Water.

a. SDCWA shall not impose any charges on any Supplemental Water delivered to the Settlement Parties directly from Metropolitan's water distribution system without the use of any portion of SDCWA's water distribution system.

b. On a monthly basis, the Settlement Parties shall pay SDCWA the lesser of the following amounts for conveying Supplemental Water through any portion of SDCWA's water distribution system:

i. A transportation charge of \$55.00 for each acre-foot of Supplemental Water conveyed by SDCWA for use by the Settlement Parties in 2004. Thereafter, the transportation charge will increase at the rate of one and fifty-five hundredths percent (1.55%) per year for as long as this Agreement is in effect.

or

ii. SDCWA's transportation rate in effect for conveying water through the SDCWA facilities.

c. SDCWA shall not impose any rates or charges other than those set forth in subsection b for, or based on, any Supplemental Water delivered to the Indian Water Authority or the Indian Bands for use on the Reservations either directly or indirectly, including Supplemental Water received by Escondido or Vista in exchange for Local Water delivered by or allocated by them for use on the Reservations.

d. Except for the Supplemental Water that is delivered or exchanged for the sole benefit of the Indian Water Authority or the Indian Bands for use on the Reservations as referred to in subsection c, Supplemental Water conveyed to Escondido or Vista for use within the service areas of those entities may be included within SDCWA's calculation of water delivered to Escondido and Vista for the purpose of determining any SDCWA rates or charges that are calculated based on total water deliveries to SDCWA's member public agencies using SDCWA facilities, to the same extent that such rates and charges are imposed on SDCWA's member public agencies.

e. If SDCWA establishes a charge for treated water, then on a monthly basis, the Settlement Parties shall pay SDCWA's treatment charges applicable to treated water delivered to the Local Entities or SDCWA's member public agencies in the immediate vicinity of the Reservations. .

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f. No other fees or charges, including but not limited to taxes, in lieu taxes, or annexation fees, shall be assessed or imposed by SDCWA on the United States or the Settlement Parties in return for conveying Supplemental Water.

g. Nothing in this Agreement shall preclude SDCWA from imposing fees or charges, including but not limited to taxes, in lieu taxes, or annexation fees, for provision of services other than those provided for by this Agreement, or as a result of inclusion of land within the service territory of SDCWA or a member public agency of SDCWA.

h. The Parties intend that, notwithstanding any future modifications to SDCWA's rate structure, the benefits set forth in subsections a through f shall not be impaired and the burdens shall not be increased. Provided, however, that nothing in subsections b through f is intended to excuse Escondido or Vista from any of the obligations of member public agencies of the SDCWA except as those obligations relate specifically to Supplemental Water as addressed in those subsections.

i. Before delivery of Supplemental Water, SDCWA and the Settlement Parties will develop a protocol for determining the actual monthly quantity and flow rates of Supplemental Water delivered or exchanged to the Indian Water Authority or the Indian Bands for use on the Reservations and the actual monthly quantity of Supplemental Water delivered or exchanged for the use of the Local Entities. The protocol shall subject Supplemental Water delivered by Metropolitan into SDCWA facilities for conveyance to the Settlement Parties but not taken, or rejected, by the Settlement Parties to provisions which are comparable to those applicable to other water ordered by SDCWA's member public agencies and delivered into SDCWA facilities but not taken, or rejected, by them. The protocol shall also include provisions for invoices to the Settlement Parties and payments to the SDCWA. All invoices and payments shall be coordinated through the Indian Water Authority. The protocol shall be consistent with Section 5 of this Agreement.

j. In the event the Settlement Parties fail to make the payments required by this Agreement, SDCWA shall give notice of such failure to the Settlement Parties, along with a statement of the amount of the payment necessary to cure, and the Settlement Parties shall have thirty (30) days from the date of such notice within which to cure. Only if the Settlement Parties do not timely cure may SDCWA, in its sole discretion, terminate deliveries of Supplemental Water until all delinquent payments, including any applicable delinquency and additional charges, have been paid.

k. Termination of deliveries of Supplemental Water until delinquent payments have been made, as provided in subsection j, above, and the procedures described in Sections 12, 13, and 14, below, shall be SDCWA's sole remedies for the failure of the United States or the Settlement Parties to make payments required by this agreement, provided that if SDCWA has not been paid all amounts required by an arbitrator's award which has determined the amount owed within six months after a court of competent jurisdiction has entered a judgment or decree enforcing such arbitrator's

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award and that judgment or decree has become final, this Agreement shall automatically terminate with no further action required by SDCWA.

5. Provision of Water by SDCWA.

a. To the extent that it is operationally feasible, the Indian Water Authority or the Indian Bands shall be permitted, at no expense to SDCWA, to have one or more direct connections to SDCWA's water distribution system constructed, either by themselves or in conjunction with one or more SDCWA member public agencies. Any such connection(s) shall be constructed either using the procedures established by the SDCWA for installation of service connections by its member public agencies or pursuant to separate agreement with SDCWA, and shall be subject to applicable environmental compliance.

b. The water conveyed by SDCWA pursuant to this Agreement shall be metered at the point or points of transfer from SDCWA's water distribution system. SDCWA shall not be responsible for any loss of water after the water leaves its distribution system.

c. All requests for conveyance of water pursuant to this Agreement shall be made as follows:

i. For water to be conveyed to direct connections to SDCWA's water distribution system, requests shall be made directly to SDCWA in accordance with SDCWA's procedures in effect at the time of the request for similar requests by its member public agencies.

ii. For water that is to be conveyed via facilities that are not owned by the Indian Water Authority or the Indian Bands, requests shall be made in conjunction with requests by the facility owner.

d. SDCWA shall not be responsible for any costs incurred in conveying the water beyond SDCWA's existing distribution system.

e. The Settlement Parties shall also provide SDCWA with an estimate of the schedule for the conveyance of Supplemental Water before April 1 of each year, in form provided by SDCWA, with an estimate of the amounts of Supplemental Water to be conveyed through any direct connection to SDCWA's distribution system. Each estimate shall contain, at a minimum, for each direct connection to SDCWA's distribution system and for each month of the year beginning with the succeeding July 1, and for all service connections collectively for each month of the succeeding four years, the quantity of Supplemental Water to be conveyed directly by SDCWA to the United States for the use of the Settlement Parties. The estimate shall constitute the Settlement Parties' initial request for deliveries for the first of the five years covered therein.

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6. Quality of Water Provided by SDCWA.

The United States may obtain either treated or untreated water from SDCWA for use by the Settlement Parties pursuant to this Agreement, and SDCWA shall only be obligated to provide water of the same quality as is or would be provided to its member public agencies at the same point for treated or untreated water, as the case may be.

7. Use of Supplemental Water.

a. Subject to any applicable federal approvals, the Supplemental Water shall only be:

- i. used by the Bands on their reservations,
- ii. used by the Local Entities within their service areas,
- iii. exchanged for water from other sources for use on the Bands' reservations or in the Local Entities' service areas, and/or
- iv. leased by the Bands for use by the Local Entities in their service areas.

b. Supplemental Water shall not be used in any manner that results in such water or water exchanged for such water being used outside of the reservations or outside of the service areas of the Local Entities or in a manner that would permit or result in a displacement of a sale of water by SDCWA to persons other than the Settlement Parties.

c. Any conveyance of Supplemental Water using facilities owned by persons or entities who are not parties to this Agreement will be the subject of a separate agreement or agreements between the United States and/or the Settlement Parties and such persons or entities.

d. Nothing in this section shall be construed as consent by SDCWA to use of Supplemental Water outside of the boundaries of the reservations or the service areas of the Local Entities.

e. Nothing in this Agreement shall be construed as a waiver by SDCWA of any right it may otherwise have to object to a potential direct connection, as contemplated in the Agreement Relating to Supplemental Water among the Metropolitan Water District of Southern California, the San Luis Rey Settlement Parties, and the United States, from the Metropolitan aqueducts to the Settlement Parties for purposes of conveying Supplemental Water, on the grounds that such connections may result in a loss of capacity or interruption or diminishment of service provided by Metropolitan to SDCWA, nor shall it be construed as an agreement by the Settlement Parties that SDCWA has any such right to object.

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8. Reliability of Deliveries.

Except as provided in Section 3, deliveries of Supplemental Water to the United States for the use of the Settlement Parties will be made in the same manner as deliveries of water to SDCWA's member public agencies that receive deliveries from the same pipeline(s). Whenever repairs or maintenance of SDCWA's distribution system shall require suspension of delivery of water, such delivery may be suspended without liability on the part of SDCWA provided, that except in cases of emergency, as determined by the General Manager of SDCWA, notice of such suspension of service shall be given to the Settlement Parties in advance of such suspension.

9. Indemnity and Hold Harmless.

Except for the United States, which shall be neither benefited nor burdened by this indemnity and hold harmless provision, each Party agrees to defend, indemnify and hold harmless the other Parties, their directors, agents, officers, employees, and authorized volunteers, from all costs, damages, liability, and claims caused by or arising out of or relating to that Party's own negligence. To the extent that more than one Party is determined to have been negligent, the Parties agree that each Party shall bear its own portion or percentage of liability based on principles of comparative fault and to indemnify and hold harmless the other Parties from that share.

10. Amendment.

Except as expressly provided herein, this Agreement contains the entire agreement between the Parties relating to the transactions contemplated hereby, and prior or contemporaneous agreements, understandings, or representations and statements, oral or written, are merged herein. No modification, waiver, amendment, discharge, or change of this Agreement shall be valid unless the same is in writing and signed by the Parties against whom enforcement of such modification, waiver, amendment, discharge, or change is or may be sought.

11. Assignment; Successors in Interest.

No Party may assign or transfer any of its rights or obligations under this Agreement without the express written consent of all of the other Parties hereto. This Agreement shall be binding on and inure to the benefit of the Parties and their successors in interest.

12. Dispute Resolution; Mediation.

a. If a dispute not involving the United States arises out of or relates to this Agreement, or the breach thereof, and it is not resolved informally, the Parties shall attempt to resolve it by using the procedures set forth in this section before resorting to arbitration or litigation. A Party requesting resolution of a dispute shall send written

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notice to all other Parties that shall set forth in detail the position of the Party requesting resolution. Within 60 days of the notice being sent, the Secretary, the General Manager of the Indian Water Authority, the chairperson of each of the Indian Bands, the General Manager of SDCWA, the Utilities Director of Escondido, and the General Manager of Vista or the respective authorized representatives of the Parties shall schedule a meeting, meet and attempt to resolve the dispute by a unanimous decision. In the event that all Parties' representatives are not present, a letter with the proposed action, signed by all the attending Parties' representatives, shall be sent to the absent Party's (Parties') representative(s) by certified mail, postage prepaid, return receipt requested. If no written protest from the absent Party's (Parties') representative is received by the other Parties within 60 days of the date of receipt of the letter with the proposed action, the decision shall be deemed unanimous and become final. Any written protest shall be mailed to each other Party's representative, and to each of the Parties by certified mail, postage prepaid, return receipt requested. Each Party shall bear its own expense for the dispute resolution proceedings. Any resolution shall be in writing and be binding on the Parties to this Agreement.

b. If said dispute cannot be settled through negotiation or through the procedure described above within 90 days of the conclusion of the dispute resolution meeting, the Parties agree to try in good faith to settle the dispute by mediation under the Commercial Mediation Rules of the American Arbitration Association

13. Dispute Resolution by Arbitration if Mediation Fails.

a. In the event that any dispute not involving the United States is not resolved using the procedure set forth in Section 12 above, said dispute shall be resolved by arbitration administered by the American Arbitration Association in accordance with its Commercial Arbitration Rules except as provided herein and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof.

b. Within thirty days after commencement of arbitration, the Settlement Parties/United States and SDCWA shall each select one person to act as arbitrator, and the two selected shall select a third arbitrator within thirty days of their appointment. If the arbitrators selected by the Parties are unable to or fail to agree upon a third arbitrator, the American Arbitration Association shall select the third arbitrator. The third arbitrator shall act as chairperson of the arbitration panel and shall be independent from all Parties, having no past, present or pending relationship with any of the parties, unless unanimously consented thereto by the Parties to the dispute.

c. Arbitration shall be limited to the consideration and resolution of the issue(s) submitted. The panel of arbitrators shall not rewrite, change, or amend this Agreement. Any payment adjustments shall accrue interest monthly at the average rate earned by SDCWA on its funds from the date the adjusted payment should have been paid until paid in full.

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d. The award of the arbitrators shall be in writing, shall be accompanied by a reasoned opinion, shall be signed by a majority of the arbitrators, and shall be rendered within 120 days after the date of the selection of the third arbitrator. Each Party shall bear the expense of its own counsel, experts, witnesses, and preparation and presentation of evidence. The administrative fees of arbitration and arbitrators' fees shall be borne 50 percent by SDCWA and 50 percent by the Indian Water Authority, Vista, and Escondido, jointly.

14. Disputes Involving the United States.

Disputes under this Agreement involving the United States shall be presented first to the Regional Director of the Lower Colorado Region of the Bureau of Reclamation. The Regional Director shall be deemed to have denied the other Party's(ies') contention or claim if it is not acted upon within 30 days of its having been presented. The decision of the Regional Director shall be subject to appeal to the Commissioner of Reclamation by a notice of appeal accompanied by a statement of reasons filed with the Commissioner of Reclamation within 30 days after such decision. The decision of the Commissioner of Reclamation shall be subject to appeal to the Secretary by a notice of appeal accompanied by a statement of reasons filed with the Secretary within 30 days after such decision. The Secretary shall be deemed to have denied the appeal if it is not acted upon within 30 days of its having been presented. The decision of the Secretary may then be appealed to the federal courts to the extent permitted by and in accordance with federal law.

15. Waiver of Sovereign Immunity.

The Indian Water Authority and the Indian Bands hereby each grant a limited waiver of sovereign immunity from an unconsented suit for the sole purpose of permitting or compelling arbitration as provided in Section 13 and consent to the jurisdiction of, and to be sued in, the United States District Court for the Southern District of California, the United States Court of Appeals for the Ninth Circuit, and the United States Supreme Court for the purpose of compelling arbitration or enforcing an arbitration award or judgment. If the United States District Court for the Southern District of California lacks jurisdiction, the Indian Water Authority and the Indian Bands consent to be sued in the California state court system, or any other court of competent jurisdiction. The Indian Water Authority and the Indian Bands hereby waive any requirement of exhaustion of tribal remedies. The Indian Water Authority and the Indian Bands do not waive any aspect of their sovereign immunity with respect to actions by persons or entities not parties to this Agreement. This waiver of sovereign immunity from suit is limited to (i) an action to compel arbitration pursuant to Section 13 of this Agreement; and (ii) enforcement of a determination by the arbitrators that the Indian Water Authority or the Indian Bands owe money pursuant to the terms of this Agreement.

AGREEMENT FOR CONVEYANCE OF WATER

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16. Agreement Not a Precedent.

This Agreement shall not be regarded as a precedent for future conveyance agreements or other arrangements.

17. Settlement Act Not Affected.

Nothing in this Agreement shall be deemed to modify or affect the obligations and responsibilities of the United States and the Settlement Parties under the Settlement Act.

18. Agreement between Settlement Parties and Metropolitan Not Affected.

Nothing in this Agreement shall be deemed to modify or affect the obligations and responsibilities of the United States, Metropolitan, and the Settlement Parties under the Agreement for Exchange or Acquisition of Water among those parties.

19. Non-Waiver.

None of the provisions of this Agreement shall be considered waived by any Party except when such waiver is given in writing. The failure of any Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or their relinquishment of any such rights for the future, but such provisions and rights shall continue and remain in full force and effect.

20. No Third-Party Rights.

The Parties do not intend to create rights in or to grant remedies to any third party or others as a beneficiary of this Agreement or of any duty, covenant, obligation or undertaking established hereunder.

21. Uncontrollable Force.

None of the Parties shall be considered to be in default in the performance of any of its obligations under this Agreement when a failure of performance shall be due to an uncontrollable force. The term "uncontrollable force" shall mean an action of the elements, excluding severe and/or prolonged low-flow conditions on the Colorado River; the act or threat of any public enemy; Acts of God; court order; war and war defense conditions; and strikes or other labor disputes; or other causes beyond its control. Each Party shall use reasonable diligence to avoid any such delay or default and to resume performance under this Agreement as promptly as possible after any such delay or default. However, nothing contained herein shall be construed so as to require a Party to settle any strike or labor dispute in which it may be involved. Any Party rendered unable to fulfill any of its obligations under this Agreement by reason of an uncontrollable force shall give prompt written notice of such fact to the other Parties and shall exercise due

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diligence to remove such inability to the fullest extent practicable with all reasonable dispatch.

22. Governing Law.

This Agreement shall be interpreted, governed by and construed under applicable federal law and the laws of the State of California to the extent such state laws are not inconsistent with any applicable federal law.

23. Notices.

Any notice given under this Agreement shall be effective when deposited postage prepaid with the United States Postal Service, addressed to the respective parties as follows:

Secretary of the Interior
U.S. Department of the Interior
18th and C Streets, Northwest
Washington, D. C. 20240

General Manager
San Diego County Water Authority
4677 Overland Drive
San Diego, California 92123

General Manager
San Luis Rey River Indian Water Authority
1010 Pauma Reservation Road
P.O. Box 428
Pauma Valley, California 92061

City Manager
(With additional copy to City Attorney)
City of Escondido
201 North Broadway
Escondido, California 92025

General Manager
Vista Irrigation District
1391 Engineer Street
Vista, California 92081-8836

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La Jolla Band of Mission Indians
Attn: Chairperson
22000 Hwy. 76
Pauma Valley, California 92061

Pala Band of Mission Indians
Attn: Chairperson
35955 Pala Temecula Road
P.O. Box 50
Pala, California 92059-0043

Pauma Band of Mission Indians
Attn: Chairperson
1010 Pauma Reservation Road
P.O. Box 369
Pauma Valley, California 92061

Rincon Band of Mission Indians
Attn: Chairperson
33750 Valley Center Road
P.O. Box 68
Valley Center, California 92082

San Pasqual Band of Mission Indians
Attn: Chairman
27458 N. Lake Wohlford Road
P.O. Box 365
Valley Center, California 92082

24. Change of Address.

Any Party may change the addressee or address to which notices are to be sent by giving notice of such change of addressee or address in conformity with the provisions of Section 23 for the giving of notice.

25. Effective Date and Approval.

The effective date of this Agreement shall be the last date on which all of the following events shall have occurred:

a. Approval by the governing bodies of SDCWA, Escondido, Vista, the Indian Water Authority, and each of the Indian Bands, and due execution of this Agreement by all such parties.

b. Execution of this Agreement by the Secretary.

AGREEMENT FOR CONVEYANCE OF WATER

October 10, 2003

Page 16

c. The Allocation Agreement has become effective.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

UNITED STATES OF AMERICA

By: *Gale A. Norton*
Secretary of the Interior

Approved as to form:

By: *[Signature]*

SAN DIEGO COUNTY WATER AUTHORITY

By: _____
General Manager

Approved as to form:

By: _____
General Counsel

SAN LUIS REY RIVER INDIAN WATER
AUTHORITY

By: _____

Approved as to form:

By: _____

AGREEMENT FOR CONVEYANCE OF WATER

October 10, 2003

Page 16

c. The Allocation Agreement has become effective.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed the day and year first above written.

UNITED STATES OF AMERICA

By: _____
Secretary of the Interior

Approved as to form:

By: Katherine Ott Verburg

SAN DIEGO COUNTY WATER AUTHORITY

By: [Signature]
General Manager

Approved as to form:

By: [Signature]
General Counsel

SAN LUIS REY RIVER INDIAN WATER
AUTHORITY

By: [Signature]

Approved as to form:

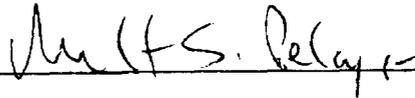
By: M. S. Delgado

AGREEMENT FOR CONVEYANCE OF WATER
October 10, 2003
Page 17

LA JOLLA BAND OF MISSION INDIANS

By:  Wendy Schlabach
Chairwoman

Approved as to form:

By: 

RINCON BAND OF MISSION INDIANS

By: 

Approved as to form:

By: 

SAN PASQUAL BAND OF MISSION INDIANS

By: 

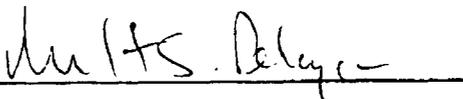
Approved as to form:

By: Joseph R. Mendez by RSP

PAUMA BAND OF MISSION INDIANS

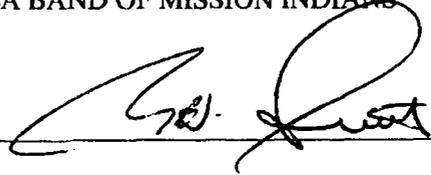
By: 

Approved as to form:

By: 

AGREEMENT FOR CONVEYANCE OF WATER
October 10, 2003
Page 18

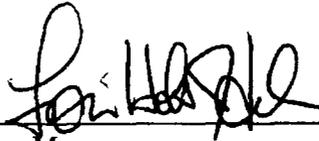
PALA BAND OF MISSION INDIANS

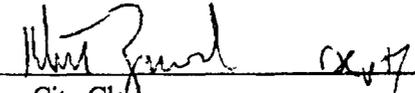
By: 

Approved as to form:

By: Barbara Tarshner

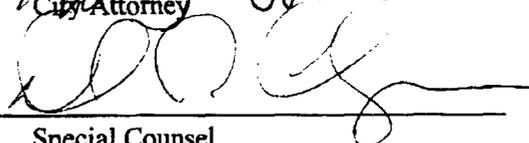
CITY OF ESCONDIDO

By: 
Mayor

By: 
City Clerk

Approved as to form:

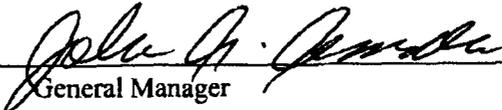
By: 
City Attorney

By: 
Special Counsel

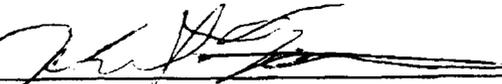
AGREEMENT FOR CONVEYANCE OF WATER
October 10, 2003
Page 19

VISTA IRRIGATION DISTRICT

By: 
President, Board of Directors

By: 
General Manager

Approved as to form:

By: 
General Counsel

CONSERVATION AGREEMENT

AMONG

THE BUREAU OF RECLAMATION, IMPERIAL IRRIGATION DISTRICT, COACHELLA VALLEY WATER DISTRICT, and SAN DIEGO COUNTY WATER AUTHORITY

This Conservation Agreement regarding implementation of a voluntary conservation plan for listed species in and around the Imperial Irrigation District, Coachella Valley Water District, and Salton Sea area is entered into this 10th day of October, 2003, among the United States Department of the Interior, Bureau of Reclamation (Reclamation), the Imperial Irrigation District (IID), the Coachella Valley Water District (CVWD), and the San Diego County Water Authority (SDCWA).

RECITALS

A. With the participation of IID, CVWD and SDCWA, Reclamation has initiated a voluntary program (the "Species Conservation Program") for the conservation of four species listed pursuant to the Endangered Species Act (ESA), Yuma clapper rail, desert pupfish, southwest willow flycatcher, and California brown pelican (the four species are referred to herein as the Listed Species), on lands comprising the approximately 500,000 acres of IID's service area in Imperial County, California, the Salton Sea (including adjacent areas in the Coachella and Imperial Valleys), lands owned by IID outside IID's service area that are currently submerged by the Salton Sea, the lower Colorado River Valley and the Coastal California range of wintering California brown pelicans (the "Conservation Area"). The Species Conservation Program is pursuant to Section 7(a)(1) of the ESA (16 U.S.C. §1536), which authorizes Reclamation to use its authorities to carry out programs for the conservation of endangered and threatened species.

B. Reclamation has authority in accordance with applicable federal law, including the ESA, to undertake a voluntary species conservation program for federally listed species in the Conservation Area.

C. IID, CVWD and the Metropolitan Water District ("MWD"), have negotiated a Quantification Settlement Agreement (QSA) that includes implementation of projects for the conservation of water that is presently used for agricultural purposes within IID and the transfer of the conserved water to CVWD, SDCWA, and MWD. IID, CVWD, SDCWA, and MWD have identified potential impacts that the QSA projects may have on endangered and threatened species in the Conservation Area. These potential impacts have been identified in the Biological Assessment prepared by Reclamation (July 2002) as revised through subsequent memoranda in October and December 2002 ("BA"), and submitted to the U.S. Fish and Wildlife Service

("Service"). After consultation between Reclamation and the Service, the Service issued a Biological Opinion dated December 18, 2002 ("BO").

D. IID has commenced the development of a habitat conservation plan ("HCP") in accordance with Section 10 of the ESA (16 U.S.C. §1539), the California Endangered Species Act ("CESA") and the California Natural Community Conservation Planning Act related to its activities, including the implementation of projects for the conservation of water identified in the QSA and activities related to and in furtherance of the QSA. The HCP is not expected to be completed for up to three years after the execution of the QSA, and IID, CVWD, and SDCWA desire to participate with Reclamation in the implementation of the Species Conservation Program for the purpose of obtaining incidental take authorizations pending completion of the HCP.

E. Reclamation has previously consulted with the Service regarding the effect on endangered and threatened species resulting from its federal actions (the changes in points of diversion from the Colorado River) related to the transfer of water through projects identified in the QSA, and the Service issued its Biological Opinion in January 2001. With the participation of IID, CVWD and SDCWA, Reclamation has developed this Species Conservation Program to meet the statutory and regulatory requirements for the issuance of incidental take authorization for the impacts to the Listed Species in the Conservation Area that may result from activities of IID, CVWD, and SDCWA relating to implementation of water conservation projects identified in the QSA, in accordance with the BA and the BO.

F. The QSA is subject to the implementation of a mechanism to resolve and allocate environmental mitigation responsibility between the Parties on the terms and conditions set forth in that certain Environmental Cost Sharing Agreement ("ECSA") among CVWD, IID, and SDCWA, attached hereto for informational purposes as Exhibit A. CVWD, IID, SDCWA and the State of California have also entered into that certain Quantification Settlement Agreement Joint Powers Agreement ("QSA JPA"), attached hereto for informational purposes as Exhibit B. Among other purposes, the QSA JPA (1) establishes a joint powers authority to fund the environmental mitigation requirements attributable to the QSA and related water transfers, (2) allocates among the State, CVWD, IID and SDCWA costs of environmental mitigation requirements; and (3) makes certain and limits the financial liability of CVWD, IID and SDCWA for environmental mitigation requirements.

G. CVWD, SDCWA and IID have agreed to substantial commitments of water, money and other valuable resources to implement the QSA, including but not limited to, this Agreement and other commitments of funds to mitigate environmental impacts of the QSA, the related water transfers and other related activities. CVWD, SDCWA and IID, individually and collectively, would not have made these commitments but for the commitments of the State in the QSA JPA.

H. This Conservation Agreement is entered into for the purpose of establishing the rights and obligations of the parties to implement the provisions of the Species Conservation Program.

WHEREFORE, in consideration of the recitals set forth above, the issuance and acceptance of incidental take authorizations pursuant to the Species Conservation Program, and the mutual promises set forth herein, the parties to this Conservation Agreement agree as follows:

AGREEMENT

Article 1 ESA Consultation

1.1 In accordance with the BA, Reclamation has consulted with the Service in accordance with Section 7(a)(2) of the ESA regarding the implementation of the Species Conservation Program. Reclamation prepared and submitted to the Service the BA described in Recital C, which identifies and analyzes the potential effects on endangered and threatened species in the Conservation Area resulting from projects for conservation of water identified in the QSA. The Service has issued the BO dated December 18, 2002 that includes a statement of the incidental take of threatened and endangered species that may result from the water conservation projects identified in the QSA within the Conservation Area. A copy of the BO is attached hereto as Exhibit C. The Service consulted with the California Department of Fish and Game ("CDFG") in connection with the measures required under the BO, in order to facilitate issuance of state permits pursuant to CESA.

1.2 Prior to any re-initiation of consultation regarding the Species Conservation Program or the projects for conservation of water identified in the QSA, Reclamation shall provide written notice to the other parties of the basis for re-initiation of consultation. The parties shall meet and confer to determine whether there are reasonable measures that may be taken to obviate the need to re-initiate consultation. In the event that there is a re-initiation of consultation with respect to the Species Conservation Program, Reclamation shall coordinate with the other parties in preparation of any biological assessment.

Article 2 Species Conservation Measures, Reasonable and Prudent Measures, and Terms and Conditions

2.1 The parties to this Conservation Agreement shall implement, or cause to be implemented: (1) the Species Conservation Program (which comprises the conservation measures set forth on pages 8 through 15 of the BO) (2) the reasonable and prudent measures (RPMs) set forth in the BO, and (3) the terms and conditions specified in the Incidental Take Statement ("ITS Terms and Conditions") portion of the BO.

Desert Pupfish

2.2 Each of the parties to this Conservation Agreement shall comply with the ITS RPMs and Terms and Conditions identified to minimize impacts to desert pupfish from the Species Conservation Program and the water conservation projects identified in the QSA.

2.3 Connectivity Impacts—Drains. IID and CVWD shall each be responsible for implementation of the provisions of Pupfish Conservation Measure 1 and the ITS Terms and Conditions Nos. 1.1, 3.1, 3.2, and 3.5 relating to maintenance of their respective drains connecting to the Salton Sea.

2.4 Connectivity Impacts-Refugium. The provisions of Pupfish Conservation Measure 1 and Terms and Conditions relating to creation of one pupfish refugium pond consistent with the Desert Pupfish Recovery Plan, as described in the BO, shall be implemented as follows:

Reclamation shall construct one refugium pond consistent with the Desert Pupfish Recovery Plan. Reclamation will coordinate with the other parties to this Conservation Agreement, the Service, and CDFG to determine the location, timing, and technique in implementing this measure. Reclamation shall bear the cost of siting and constructing the refugium pond and amounts expended by Reclamation shall be non-reimbursable for purposes of the Act of June 17, 1902 (43 U.S.C. §391 *et seq.*) and Acts amendatory thereof and supplemental thereto, and shall not be considered to be a supplemental or additional benefit for purposes of the Reclamation Reform Act of 1982 (43 U.S.C. §390aaa *et seq.*).

The party in whose service area the refugium pond is located (or IID if the refugium is located outside the service areas of the parties) shall manage and maintain the pond in accordance with Pupfish Conservation Measure 1 and shall be responsible for the implementation of the ITS Terms and Conditions Nos. 3.3 and 3.4 for the purpose of assisting in the recovery efforts for desert pupfish. It is not anticipated that these actions will entail construction of a new or replacement refugium pond or other actions that may interfere with normal agricultural operations.

2.5 Selenium Impacts. IID and CVWD shall be responsible for implementation of the provisions of Pupfish Conservation Measure 2 and the ITS Terms and Conditions Nos. 2.1 and 3.5 relating to impacts of selenium on desert pupfish.

2.6 Management and Monitoring. IID and CVWD shall be responsible for implementation of the provisions of Pupfish Conservation Measure 3 and the ITS Terms and Conditions Nos. 2.1, 4.1, 4.2, 4.3, and 4.8 relating to management and monitoring of desert pupfish.

Yuma Clapper Rail and California Black Rail

2.7 Each of the parties to this Conservation Agreement shall comply with the ITS RPMs and Terms and Conditions to minimize impacts to the Yuma clapper rail and California black rail from the Species Conservation Program and water conservation projects identified in the QSA.

2.8 Salinity Impacts. IID shall be responsible for implementation of the provisions of Rail Conservation Measure 1 and Terms and Conditions Nos. 2.2, 3.5, and 3.6 relating to the offset of potential salinity impacts to Yuma clapper rail and California black rail from the Species Conservation Program and water conservation projects identified in the QSA.

2.9 Selenium Impacts. IID shall be responsible for implementation of the provisions of Rail Conservation Measure 2 and the ITS Terms and Conditions 2.2, 3.5, and 3.6 relating to the offset of potential selenium impacts to Yuma clapper rail and California black rail.

2.10 Management and Monitoring. IID shall be responsible for implementation of the provisions of Rail Conservation Measure 3 and the ITS Terms and Conditions Nos. 4.4, 4.5, 4.6, 4.7, and 4.8 relating to management and monitoring of Yuma clapper rail and California black rail. IID, the other parties to the Conservation Agreement, the Service, and CDFG will annually review results of rail surveys and assess the effectiveness of the created marsh in providing habitat for clapper rails. In evaluating the effectiveness of the marsh in providing habitat for clapper rails, IID, the other parties to the Conservation Agreement, the Service, and CDFG will consider the use of the State and Federal refuges by clapper rails as compared to the created marsh. By considering and comparing use (occurrence, abundance, and life history functions) of the created marsh and at State and Federal refuges (if available), it will be possible to assess whether the created marsh is providing for the species, while at the same time taking into account stochastic factors not attributable to management. Management will be adjusted as necessary based on the results of the annual surveys.

Southwestern Willow Flycatcher

2.11 Evaluation of Habitat. Reclamation shall be responsible for implementation of Willow Flycatcher Conservation Measure 1 relating to the identification of suitable southwestern willow flycatcher breeding habitat, as follows:

Reclamation shall evaluate all cottonwood-willow and tamarisk stands that may potentially be affected by the QSA water conservation projects for southwestern willow flycatcher breeding habitat suitability. Using the Anderson and Ohmart classification system (1994), each Saltcedar III and IV and each Cottonwood-willow I, II, III, and IV stand will be evaluated for suitability based on density, structure, and presence of standing water or saturated soils during the breeding season. Suitable breeding habitat will be identified based on characterizations provided in the draft Southwestern Willow Flycatcher Recovery Plan.

Reclamation will perform these evaluations prior to any IID water conservation activities which could impact tamarisk habitat. Upon completion of this initial evaluation, a specific protocol for the habitat monitoring (identified below as voluntary Willow Flycatcher Conservation Measure 2) will be developed in consultation with the other parties to the Conservation Agreement, the Service, and CDFG. This protocol will address the timing and duration of monitoring activities and other details as required.

Reclamation shall bear the cost of performing these evaluations and amounts expended by Reclamation shall be non-reimbursable for purposes of the Act of June 17, 1902 (43 U.S.C. §391 *et seq.*) and Acts amendatory thereof and supplemental thereto, and shall not be considered to be a supplemental or additional benefit for purposes of the Reclamation Reform Act of 1982 (43 U.S.C. §390aaa *et seq.*). Each party shall bear its own cost for participating in the reviews and discussions with the Service and CDFG regarding development of the protocol for habitat monitoring.

2.12 Suitable Habitat Monitoring and Management. Each party whose service area includes suitable southwestern willow flycatcher breeding habitat, as identified by Reclamation pursuant to Willow Flycatcher Conservation Measure 1, shall be responsible for implementation of the provisions of Willow Flycatcher Conservation Measure 2 relating to monitoring the habitat and quantifying changes in quantity and quality of the habitat within their service area and Willow Flycatcher Conservation Measure 3 relating to the management and monitoring of replacement habitat for southwestern willow flycatcher within their service area.

2.13 Take Minimization During Construction. IID shall be responsible for implementation of the provisions of Willow Flycatcher Conservation Measure 4 relating to the avoidance of construction impacts to southwestern willow flycatcher along the East Highline Canal and lateral interceptors.

California Brown Pelican

2.14 Roost Site Creation. IID, in cooperation with SDCWA and CVWD, shall be responsible for implementation of Brown Pelican Conservation Measure 1 and ITS Terms and Conditions Nos. 3.5 and 3.7 relating to the creation of coastal roost sites for California brown pelicans. The California Department of Fish and Game has indicated that it may assume responsibility for implementation of Brown Pelican Conservation Measure 1 and ITS Terms and Conditions Nos. 3.5 and 3.7 relating to the creation of coastal roost sites for California brown pelicans. If the California Department of Fish and Game fails to assume that responsibility, IID, in cooperation with SDCWA and CVWD, shall remain responsible for those measures. IID, in cooperation with the other parties to the Conservation Agreement, shall be responsible for the implementation of Terms and Conditions Nos. 1.2, 3.5, and 3.7 relating to the creation of roost structures in and around the Salton Sea.

Article 3 General Provisions

3.1 IID, SDCWA, and CVWD acknowledge that they are each required to provide funds to pay certain mitigation costs pursuant to the ECSA and the QSA JPA, including their respective costs incurred pursuant to this Conservation Agreement. Notwithstanding any provision of this Agreement, the Species Conservation Program or the BO, IID, SDCWA, and CVWD, individually and collectively, shall not be required to pay, or contribute to the payment of, or incur any costs or expenses related to the implementation of this Agreement, except to the extent and as provided in the ECSA and the QSA JPA. Without limiting the generality of the foregoing, IID, SDCWA, and CVWD are not required to pay or incur any costs or expenses attributable to the implementation of this Agreement in an amount that would exceed the limitations attributable to such agencies, individually and collectively, in the ECSA and the QSA JPA. IID, as the CEQA Lead Agency for the IID Water Conservation and Transfer Project, shall have the right to rely upon the commitments of the parties set forth in the Conservation Agreement, the ECSA and the QSA JPA to perform and/or fund the Species Conservation Program.

3.2 The party with responsibility for implementation of each conservation measure adopted in the BO and each ITS Term and Condition shall perform its obligations in a timely manner and with the frequency required.

3.3 Notwithstanding the allocation of responsibility for implementation, each party may participate, at its own cost, in any discussions with the Service and CDFG regarding each conservation measure or ITS Term and Condition. To ensure the opportunity for such participation, each party shall give reasonable notice to the other parties of any planned or scheduled discussions with the Service and CDFG regarding each matter governed by this Conservation Agreement.

3.4 Each party that is required to prepare any report, plan or other document to implement any conservation measure or ITS Term and Condition shall provide a copy of each report, plan or other document to the other parties within a reasonable time after its preparation.

3.5 Reimbursement of all costs and expenses incurred by IID, CVWD, or SDCWA shall be made in accordance with the provisions of the ECSA and the QSA JPA.

3.6 Upon the completion of an HCP, if any, that provides incidental take authority for the same water conservation projects identified in the QSA that are covered by the BO, the parties shall meet and confer in good faith to identify duplicative conservation measures and ITS Terms and Conditions that are required by both the BA/BO and the HCP. By written agreement executed by all of the parties to this Conservation Agreement, the rights and obligations for implementation and funding of each identified duplicative conservation measure, or Term and Condition may be re-assigned to avoid duplication, consistent with the parties' obligations under the ECSA and the QSA JPA.

3.7 Any notice that is authorized or required to be given pursuant to this Conservation Agreement shall be delivered by first class mail, postage prepaid, as follows:

Reclamation	Area Manager, Boulder Canyon Operations Office Attn: Ms. Jayne Harkins U.S. Bureau of Reclamation P.O. Box 61470 Boulder City, Nevada 89006-14
IID	Imperial Irrigation District Attn: Tina Shields P. O. Box 937 Imperial, CA 92251
CVWD	Coachella Valley Water District Attn: Steve Robbins P. O. Box 1058 Coachella, CA 92236

SDCWA

San Diego County Water Authority
Attn: Larry Purcell
4677 Overland Avenue
San Diego, CA 92123

Any party may change the address to which notices are to be sent by giving written notice of such change to the other parties in accordance with this paragraph.

3.8 Nothing in this Conservation Agreement shall affect the rights and obligations of the parties under other agreements governing the implementation of conservation measures for impacts to endangered and threatened species on the Colorado River resulting from water transfer projects identified in the QSA.

Article 4 Commencement and Termination

4.1 This Conservation Agreement shall become effective only upon the execution by all parties of this Conservation Agreement, and execution by the United States District Court for the Southern District of California of the Stipulation and Order dismissing the case IID v. United States et al., Case No. 03-CV-0069W(JFS).

4.2 The obligations of each party under this Conservation Agreement to implement or finance the conservation measures and ITS RPMs and Terms and Conditions, shall be effective only to the extent that the BO issued by the Service remains in effect and includes a statement of the incidental take, if any, that will result from the action. The statement of the incidental take shall include any incidental take of Listed Species that is likely to result from the water conservation projects identified in the QSA.

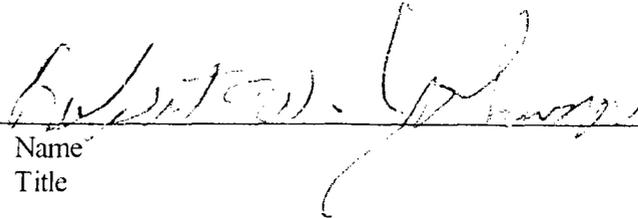
4.3 In the event that any party fails to timely or properly implement the BO's conservation measures and ITS Terms and Conditions for which the party is responsible, any other party may, after giving reasonable notice and opportunity to perform, undertake to implement those measures. In the event that IID, CVWD, and SDCWA fail to perform an obligation of any of them after written notice to each from Reclamation and a reasonable time for them to perform, Reclamation shall have no further responsibility to perform its obligations under this Conservation Agreement.

4.4 This Conservation Agreement shall automatically terminate in the event of a termination of the Colorado River Water Delivery Agreement pursuant to paragraphs 6(b) and (c) therein.

4.5 In the event of a termination pursuant to this Article, each party shall remain liable to meet any obligations that were incurred pursuant to this Conservation Agreement prior to the effective date of the termination consistent with the parties' obligation under the ECSA and the QSA JPA.

IN WITNESS WHEREOF, the parties have executed this Conservation Agreement as of the date first written above.

Reclamation United States Department of the Interior, Bureau of Reclamation

By 
Name
Title

IID Imperial Irrigation District

By 
Name
Title Chief Counsel

CVWD Coachella Valley Water District

By 
Name
Title GENERAL MANAGER

SDCWA San Diego County Water Authority

By 
Name
Title General Manager

N.FLETR

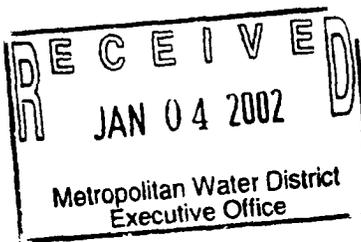
cc: Dennis U.
Jeff K.
~~...~~



United States Department of the Interior

BUREAU OF RECLAMATION
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, NV 89006-1470

DEC 19 2002



IN REPLY REFER TO:
BCOO-1000
ENV-7.00

Mr. Ronald R. Gastelum
Chief Executive Officer
The Metropolitan Water District
of Southern California
PO Box 54143
Los Angeles, California 90054-0153

Subject: Final Fish and Wildlife Service Biological Opinion on Reclamation's Proposed Section 7(a)(1) Conservation Measures for Listed Species in the Imperial Irrigation District/Salton Sea Areas

Dear Mr. Silva

I am pleased to provide you a copy of the subject final Biological Opinion (BO). This completes the Section 7 consultation initiated by Reclamation in July of this year and provides Endangered Species Act compliance for the water transfer between Imperial Irrigation District and the San Diego County Water Authority. We appreciate the cooperative effort of all parties in completing the consultation. The document is now available to be forwarded to the California Department of Fish and Game for their consideration of a consistency determination to achieve compliance with the California Endangered Species Act. We view this as a significant milestone in completing the required activities for implementation of the California Plan and the Quantification Settlement Agreement (QSA). We remain hopeful that execution of the QSA can still be achieved by the end of this year.

Sincerely,

Robert W. Johnson
Robert W. Johnson
Regional Director

Enclosure

Identical Letter Sent to:

Mr. Tom Levy
General Manager
Coachella Valley Water District
P.O. Box 1058
Coachella, California 92236

Ms. Maureen Stapleton
General Manager
San Diego County Water Authority
4677 Overland Avenue
San Diego, California 92123

Mr. Jesse Silva
General Manager
Imperial Irrigation District
PO Box 937
Imperial CA 92251

cc: Mr. Tom Hannigan
Director
Department of Water Resources
State of California,
1416 Ninth Street
Sacramento, California 95814

Mr. Jim Bartel
Field Supervisor
U.S. Fish and Wildlife Service
2730 Loker Avenue
West Carlsbad, California 93208

Mr. Gerald Zimmerman
Executive Director
Colorado River Board of California
770 Fairmont Avenue, Suite 100
Glendale, California 91203
(w/cy encl to ea)

Mr. Steve Thompson
United States Fish and Wildlife Service
2800 Cottage Way, Suite W-2606
Sacramento, California 95825

Mr. Robert C. Hight
Director
Department of Fish and Game
1416 Ninth Street, Sacramento, California 95814
(w/e-mail encl to ea)



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92009

In Reply Refer to: FWS-IMP-2628.10

DEC 18 2002

MEMORANDUM

To: Regional Director, Lower Colorado Region,
Bureau of Reclamation, Boulder City, Nevada

From:  Assistant Field Supervisor, Carlsbad Fish and Wildlife Office,
Fish and Wildlife Service, Carlsbad, California

Subject: Draft Biological Opinion on the Bureau of Reclamation's Voluntary Fish and
Wildlife Conservation Measures and Associated Conservation Agreements with the
California Water Agencies

This document transmits the Fish and Wildlife Service's (Service) biological opinion for the proposed Bureau of Reclamation (Reclamation) Voluntary Fish and Wildlife Conservation Measures and associated conservation agreements to be entered into by Reclamation and the California water agencies, and their effects on the federally listed species, and their designated critical habitat where applicable, in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The voluntary fish and wildlife conservation measures are being implemented as part of Reclamation's existing authorities pursuant to section 7(a)(1) of the ESA. The California water agencies have offered to enter into conservation agreements with Reclamation to implement these measures to help offset the impacts of the water conservation and transfer activities necessary to implement the California Plan for the Colorado River discussed below. Therefore, this document will also provide an analysis of the interrelated effects of the Imperial Irrigation District (IID) water conservation activities necessary to provide for the transfer of water from IID to the San Diego County Water Authority (SDCWA), Coachella Valley Water District (CVWD) and Metropolitan Water District of Southern California (MWD) as called for in that plan.

We received your July 23, 2002, memorandum requesting formal consultation on July 25, 2002. The following species were included in the Biological Assessment:

desert pupfish	<i>Cyprinodon macularius</i>	Endangered (E), with Critical Habitat (CH)
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	E
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E

least Bell's vireo	<i>Vireo bellii pusillus</i>	E, CH
California brown pelican	<i>Pelecanus occidentalis</i>	E
bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened (T)
California least tern	<i>Sterna antillarum browni</i>	E
razorback sucker	<i>Xyrauchen texanus</i>	E, CH
mountain plover	<i>Charadrius montanus</i>	Proposed T
California black rail	<i>Laterallus jamaicensis coturniculus</i>	State T

This biological opinion is based on information provided in: (1) Biological Assessment (BA) and subsequent Errata for the above proposed project developed by Reclamation, (2) Environmental Impact Report, including draft Habitat Conservation Plan developed by the IID, and (3) other existing information in the Service's files. A complete administrative record of this consultation is on file at the Service's Carlsbad Fish and Wildlife Office.

As a result of our review of the proposed fish and wildlife conservation measures and the interrelated effects of the water conservation activities, we have determined that some of these species are not likely to be adversely affected. The Service anticipates that the proposed fish and wildlife conservation measures and IID's water conservation activities are not likely to adversely affect the southwestern willow flycatcher, least Bell's vireo, bald eagle, California least tern, and razorback sucker for the reasons described below. No additional discussion of these species is included herein. We are including a discussion of the California black rail (*Laterallus jamaicensis coturniculus*) for the purposes of technical assistance.

Although the fish and wildlife conservation measures and the interrelated effects of the water conservation activities may affect the southwestern willow flycatcher, adequate migration resources will remain in the Salton Trough to meet this species' migration needs. Given that this species is not currently known to breed in the area but that Reclamation and its conservation agreement partners propose to offset losses of suitable breeding habitat that result from the water conservation activities, we concur with Reclamation's conclusion that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect, but are not likely to adversely affect, the southwestern willow flycatcher.

Although the fish and wildlife conservation measures and the interrelated effects of the water conservation activities may affect the least Bell's vireo, adequate migration resources will remain in the Salton Trough to meet this species' migratory needs. Given that this species is not currently known to breed in the area and records of its use of the area are limited, we have determined that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities are not likely to adversely affect the least Bell's vireo.

The bald eagle has been observed at the Salton Sea irregularly in the winter months and is not known to nest there. The anticipated water conservation-related changes in Salton Sea salinity could affect fish availability. However, the low numbers of birds recorded using the Salton Sea (1-3/year) suggest that the bald eagle is not dependent on the Salton Sea during winter migration. Fish are expected to continue to be available to a more limited extent at the river deltas and other smaller lakes in the Imperial Valley (Fig Lagoon, Finney and Ramer Lakes, Wiest Lake, and

Sunbeam Lake) in addition to the waterfowl available in winter at the State and Federal wildlife refuges and the many duck clubs present in the Imperial Valley. No impacts are anticipated as a direct result of on-farm or system water conservation activities. Given the anticipated long-term availability of forage in the area and the low number of bald eagles expected to be present, the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the bald eagle.

The least tern has been observed irregularly at the Salton Sea. Because the numbers of least terns that have been recorded at the Salton Sea are very low (fewer than 10 records at the Sonny Bono Salton Sea NWR), it does not appear that the California least tern is dependent upon the Salton Sea as a migratory stopover. It is unlikely that the increase in salinity and corresponding loss of fish associated with the interrelated effects of the water conservation activities would adversely affect the California least tern. We anticipate that some fish will continue to be available at the mouths of the rivers and drains. Based on this information, we have determined that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the California least tern.

The razorback sucker is only expected to be found in the main delivery canals and storage reservoirs within the Imperial Valley. Although the total flows in the main canals will be reduced, elevation is tightly controlled to maximize hydro-electric power generation and water delivery efficiency. The only canal lining planned for water conservation involves the smaller lateral canals. There are no records of razorback suckers being found in the smaller lateral canals. As no physical modifications are planned to the main canal and reservoir facilities that are known to be used by razorback suckers as part of the water conservation and transfer program and the changes in flows in the main canals are expected to be minor, no adverse impacts to this species are anticipated. We concur with Reclamation's conclusion that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the razorback sucker. The lining of the All American Canal has been addressed through a separate consultation process and is not included in this analysis.

In Reclamation's BA a conclusion was provided that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the mountain plover. Reclamation has withdrawn this conclusion through the comments provided on the draft biological opinion. Therefore, we will not be conferencing on this species. Should an incidental take exemption be required as a result of a future listing of the mountain plover for any impacts associated with the proposed fish and wildlife conservation measures and/or interrelated effects of IID's water conservation activities, Reclamation will need to re-initiate consultation under section 7 of the ESA with the Service.

CONSULTATION HISTORY

A complete history of the Carlsbad Fish and Wildlife Office's participation in this process can be found in Attachment D.

Reclamation functions as the Water Master of the Colorado River on behalf of the Secretary of the Interior. In this capacity, Reclamation is responsible for the management of the use of the Colorado River by the various water rights holders throughout the Colorado River states. The Colorado River is divided into upper and lower basins for operational purposes. Operation of the lower Colorado River, from Pierce Ferry to the Southerly International Boundary, was addressed in a biological opinion from the Service dated April 30, 1997. By operation of contracts for permanent water delivery service executed in the 1930's, any unused Colorado River water by a seniority priority holder within California's allocation is directed to the next junior user. Thus, in Southern California, the Secretary is without the authority to direct unused Colorado River water by a contractor to any other purpose other than the next contractor in priority.

In an effort to prepare for likely reductions of Colorado River water available to California, the Colorado River Board of California prepared the California Plan, which was released in draft form in May 2000 and is available for public review at www.crb.water.ca.gov/reports.htm. The California Plan provides a framework for the State to coordinate and assist in the cooperative implementation of diverse programs, projects, and other activities that would reduce California's use of Colorado River water and facilitate conformance with California's annual apportionment. It involves the conservation of water in southern California and the transfer of conserved water from agricultural to predominantly urban uses. The proposed Quantification Settlement Agreement (QSA) is designed to include key contractual arrangements among IID, MWD, and CVWD, which are needed to implement major components of the California Plan.

The Service initially met with Reclamation, IID and SDCWA to discuss the transfer on January 6, 1999. This initial meeting was the introduction to the proposed project for the Service. A second meeting occurred on February 19, 1999, which focused on the issues of Endangered Species Act (ESA) compliance through section 7 versus section 10, direct and indirect impacts in the Imperial Valley and San Diego County, and the California 4.4 Plan. On December 7, 1999, the Service began regular meetings with IID to begin the development of the Habitat Conservation Plan (HCP) to address all impacts within the Imperial Valley, the Salton Sea, and along the All-American Canal (exclusive of canal lining activities). The lower Colorado River species were also discussed.

From February - August 2000, the Service had monthly meetings with IID to provide guidance on their development on the HCP. On September 13, 2000, IID indicated that they should be ready to submit the HCP to the resource agencies by the end of November or first of December. On November 6, 2000, an amended Notice of Intent was published by Reclamation in the Federal Register to address coverage of permit issuance in the draft EIR/EIS. A 30-day comment period followed during which the Service received three comment letters.

As a result of proposed adoption of the Interim Surplus Guidelines and the change in point of diversion of up to 400,000 acre-feet per year of Colorado River water, Reclamation consulted with the Service on endangered species impacts in 2000. On January 12, 2001, the Service's Phoenix Fish and Wildlife Office issued their biological opinion to Reclamation, which covered the Interim Surplus Criteria, the Secretarial Implementation Agreements and Biological Conservation Measures to be implemented in association with the proposed modifications in river operations, including the change in point to diversion for the water to be transferred to San Diego County Water Authority.

That document provides incidental take to Reclamation for their actions on the lower Colorado River that are required to implement the water transfer as part of the California 4.4 Plan. Indirect effects of the transfer in receiving areas were discussed in the document. Incidental take has already been provided in some areas through regional HCPs. Incidental take in areas not covered by regional HCPs was deferred to coverage as future projects are developed. Incidental take in the Imperial Valley and Salton Sea was to be addressed in IID's HCP, and incidental take associated with the use of the water by CVWD was to be covered by participation in a regional Coachella Valley HCP, or their own HCP.

Beginning in April of 2001 through May of 2002 (see the Attachment D for details), the Service and the California Department of Fish and Game (CDFG) were involved in intensive discussions with IID on the HCP. Meetings were scheduled weekly for two days to try to resolve issues associated with the HCP. While significant progress was made on the Imperial Valley portions of the HCP, significant uncertainty remained with the approaches being considered for the Salton Sea fish-eating bird species. Given the short time frame remaining, Reclamation determined in July of 2002 that it did not appear to be feasible to complete the HCP and permitting process by December 31, 2002. Recognizing the need for incidental take coverage in the absence of a HCP/section 10 (a)(1)(b) permit, Reclamation has developed a set of fish and wildlife conservation measures to be undertaken by Reclamation and/or its conservation agreement partners for listed species as called for under section 7(a)(1) of the ESA. The desert pupfish, Yuma clapper rail, southwestern willow flycatcher and California brown pelican were to be addressed. Reclamation then began developing the BA including the proposed fish and wildlife conservation measures along with the interrelated water conservation and transfer activities. Under this process CDFG would have the opportunity to determine whether the BA and biological opinion are compatible with the State's permitting process. IID is responsible for maintenance issues, which will need to be addressed separately as such issues are not part of this action and are outside the scope of this consultation.

On July 25, 2002, the Service received Reclamation's request for initiation of formal consultation (dated July 23, 2002) along with a BA for Reclamation's proposed voluntary fish and wildlife conservation measures.

The Service, Reclamation, and CDFG met on August 22, 2002, to discuss the BA. We discussed the proposed measures for the Yuma clapper rail and the southwestern willow flycatcher at length. The California black rail will be added to the BA. The acreage of marsh mitigation already included for the Yuma clapper rail is believed to be conservative enough to include them given the salinity acreage is based on the most sensitive vegetation and the selenium acreage was based on total vegetated acres. The mountain plover needs additional analysis to reflect its specific habitat preferences and the possibility that only hay crops may be fallowed. The Service, Reclamation and CDFG re-convened on August 29-30, 2002, to continue the discussion on the BA. We went on to discuss the desert pupfish. The lack of a refugium pond appeared to be the largest gap relative to what had been agreed to in the HCP. Reclamation agreed to add this to the first measure for pupfish. Reclamation agreed to several changes to the BA to address Service and CDFG concerns. Language will be incorporated from the HCP to indicate more specifically what monitoring will be required, and a requirement for a monitoring plan that is approved by the Service and CDFG will be added. The Service suggested that the document needed additional clarification on how it was

decided that species would be included or not included in the different levels of analysis. Reclamation agreed to re-evaluate the language that is currently in the document and add details as needed. We briefly discussed other more general comments. Reclamation agreed to evaluate our comments and incorporate changes as appropriate. The consultation period officially closed October 23, 2002, and Reclamation provided an updated project description to the Service on that date. Through a brief phone conversation with Bruce Ellis of Reclamation on October 23, 2002, the addition of rail surveys to Rail Measure 3 and the word "monthly" to the sentence on brown pelican surveys in Brown Pelican Measure 1 were approved.

A conference call was held on November 27, 2002, to discuss the remaining outstanding issues in the consultation. In that discussion the Service informed Reclamation that we did not concur with Reclamation's conclusion that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect, but are not likely to adversely affect, the mountain plover. We had determined that the water conservation activities were likely to adversely affect this species as a result of the loss of up to 80,500 acres (1/3 of the acreage) of preferred crop types (alfalfa and Bermuda grass). The North American population of the mountain plover has been estimated at 9,000 birds (Brown *et al.* 2001). Wunder and Knopf (in press) surveyed wintering mountain plovers in Imperial Valley from 9-19 January 2001, and they recorded 4,037 plovers in 36 flocks ranging in size from 4 to 596 birds. This is believed to be nearly half of the current population (Fritz Knopf, USGS, pers. comm.), suggesting a recent shift in use from California's Central Valley and making the Imperial Valley the most important wintering area for this species. Because of the high dependence of this species on appropriate field types for foraging in the Imperial Valley, large decreases in the acreage of the preferred crop types may interfere with the survival and recovery of the species. The specific acreage requirements for wintering mountain plovers have not been determined, so it is not possible to quantify the impacts to individual plovers at this time. Therefore, it would not be possible to complete a conference opinion for this species.

We relayed to Reclamation that in order to properly evaluate the potential effects of the proposed conservation measures and the potential interrelated effects, it would be necessary to determine the winter habitat requirements for this species in the Imperial Valley and consider the effects of the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities in that context. Ongoing monitoring of the mountain plover population, identification of its specific wintering habitat requirements and quantification of the available foraging habitat in the Imperial Valley would be required to quantify the impacts associated with the proposed conservation measures and the interrelated effects of the water conservation activities and to prevent a level of loss of their foraging habitat to an extent that survival and recovery of this species could be impacted. In their comments on the draft biological opinion transmitted to the Service on December 9, 2002, Reclamation withdrew their request for conference on this species. They withdrew their determination that the proposed fish and wildlife conservation measures and interrelated water conservation activities were not likely to adversely affect the mountain plover and the voluntary conservation measure that they had provided in their program for this species.

DESCRIPTION OF THE PROPOSED ACTION

In the biological opinion issued by the Service in January 2001, an evaluation of direct and indirect effects of the California 4.4 plan anticipated that effects on listed species within the IID Service area and Salton Sea would be addressed through a Habitat Conservation Plan (HCP) being developed at that time by IID. Because of the complexity of the issues associated with the HCP, it became necessary to use an alternative approach for ESA compliance to meet the deadline for execution of the QSA of December 31, 2002. Reclamation developed the alternative approach to ESA compliance via section 7 described below so that execution of the QSA could proceed on December 31, 2002 as scheduled. If the QSA is not implemented, Reclamation may choose not to undertake the proposed fish and wildlife conservation measures. The QSA has been amended to provide an additional year for completion of the HCP that would cover a broader array of species and additional activities in the Imperial Valley including operations and maintenance. The incidental take exemption provided by this biological opinion will remain in effect for Reclamation and the California water agencies with which it has executed conservation agreements as long as Reclamation and its conservation agreement partners implement the fish and wildlife conservation measures as described in this project description and the terms and conditions of the Incidental Take Statement provided below. This biological opinion shall remain in effect for the duration of the water conservation and transfer program unless the California water agencies provide a HCP that addresses the federally-listed species in and around the Salton Sea and the incidental take associated with the proposed fish and wildlife conservation measures and water conservation activities is permitted through a section 10(a)(1)(B) incidental take permit.

Conservation Measures

The Proposed Action is implementation of voluntary fish and wildlife conservation measures in conjunction with non-federal parties designed to conserve listed species found in the area of the Salton Sea (including adjacent areas in the Coachella and Imperial Valleys). The proposed voluntary fish and wildlife conservation measures are designed, in part, to avoid, minimize, and offset impacts of IID's water conservation activities on federally listed species. Reclamation proposes to implement the proposed fish and wildlife conservation measures, either separately or cooperatively with some or all of the QSA beneficiaries (IID, SDCWA, CVWD, and MWD) in the State of California as partners. Specific conservation agreements for implementation of the fish and wildlife conservation measures will be developed with willing partners during the consultation period, and actual execution of the agreements will occur prior to the issuance of a Record of Decision (ROD) by Reclamation. Reclamation currently anticipates that the majority of the fish and wildlife conservation measures will be carried out by the California water agencies. Habitat-based and species-specific fish and wildlife conservation measures are proposed. Habitat-based measures are designed to offset the potential loss of habitat values (quantity and quality) with an overall objective of maintaining or increasing, where possible, the value (amount and/or quality) of each habitat used by federally listed species addressed in the voluntary fish and wildlife conservation program (e.g., drain, tamarisk scrub, and Salton Sea habitats) consistent with Reclamation's section 7(a)(1) responsibilities.

Reclamation and its conservation agreement partners will meet with the Service and CDFG within 90 days of the issuance of Reclamation's ROD to determine a schedule for the development of the management and monitoring plans and the implementation of the voluntary fish and wildlife conservation measures described below.

Desert Pupfish

Various surveys conducted by the CDFG and others have recorded the presence of desert pupfish in many of IID's drains that discharge directly to the Salton Sea (Sutton 1999). Although IID routinely maintains adequate drainage in these channels by removing vegetation and sediment, these drains provide the habitat conditions (e.g., water quality, food source, and aquatic vegetation) necessary to support pupfish. Implementation of water conservation activities by IID has the potential to degrade water quality in the drains occupied by pupfish.

The intent of the desert pupfish conservation measures is to maintain viable populations in the action area by maintaining or increasing pupfish habitat in IID's drains relative to current levels (i.e., no net loss) and maintaining connectivity among drain populations.

1. Minimize the impacts of potential increases in Salton Sea salinity concentrations on pupfish habitat by maintaining connectivity among drains (Pupfish Conservation Measure 1)
2. Minimize the impacts of potential increases in selenium concentrations and possible other contaminants in the drainage system resulting from water quality changes (Pupfish Conservation Measure 2)

Pupfish Conservation Measure 1: Connectivity Impacts

In cooperation with its conservation agreement partners, Reclamation will ensure that an appropriate level of connectivity is maintained between pupfish populations in individual drains (in CVWD's area at the north end of the Salton Sea and in IID's area at the south end of the sea) connected to the Salton Sea either directly or indirectly and that drain habitat below the first check will be maintained in the event that conditions in the Salton Sea become unsuitable for pupfish. Reclamation and its conservation agreement partners will undertake planning and studies so that before the salinity of the Salton Sea reaches 90 ppt (or lower as determined by the Service and CDFG), or physical barriers impede pupfish movement, the parties can implement a detailed plan for ensuring genetic interchange among the pupfish populations in the drains.

In cooperation with its conservation agreement partners, Reclamation will maintain the amount of potential pupfish drain habitat (expressed as linear channel distance) over the term of IID's water conservation and transfer project. This will be accomplished as the Sea recedes by extending or modifying existing IID and CVWD drains or by maintaining the suitability of naturally created drain channels. The design, configuration, and management of these areas will be developed jointly with Reclamation, Service and CDFG staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration). These extended or modified drains will

be monitored beginning with the first extension or modification and continuing for the term of the proposed fish and wildlife conservation measures and interrelated water conservation activities. If pupfish use of these areas cannot be established within 5 years, Reclamation and its conservation agreement partners will work with the Service and CDFG to determine the potential cause(s) for pupfish absence. Reclamation and its conservation agreement partners, in coordination with the Service and CDFG, will implement actions in the management, operation or maintenance of the extended or modified drains that are appropriate to correct conditions that are causing the absence of the pupfish. These actions may entail minor adjustments to the channel configuration (channel and pool depths, flow velocity, connectivity, and turbidity), vegetation management, and timing of scheduled maintenance. It is not anticipated that these actions will entail construction of new or replacement drain habitat, require supplemental flows in the drains, or other actions that may interfere with normal agricultural operations. Once pupfish presence is confirmed, monitoring will continue as per Pupfish Conservation Measure 3.

Reclamation, in cooperation with its conservation agreement partners, also will construct and maintain one refugium pond consistent with the Desert Pupfish Recovery Plan. This pond will be maintained for the purpose of assisting in the recovery efforts for that species. The parties will work with the Service and CDFG to determine the location, timing, and technique in implementing this measure. After pupfish have been stocked into the refugium pond, it will be monitored for 5 years to determine if successful reproduction is occurring. If successful reproduction is not occurring, Reclamation and its conservation agreement partners will meet with the Service and CDFG within 6 months to determine the potential cause(s) for the failure of pupfish to reproduce in the refugium. Reclamation and its conservation agreement partners, in coordination with the Service and CDFG, will implement actions in the management, operation or maintenance of the refugium that are appropriate to correct conditions that are causing the failure of the pupfish to reproduce. These actions may entail minor adjustments to the pond configuration (pool depth and shoreline complexity), vegetation management, and timing of scheduled maintenance. It is not anticipated that these actions will entail construction of a new or replacement refugium pond or other actions that may interfere with normal agricultural operations.

Pupfish Conservation Measure 2: Selenium Impacts

Reclamation and its conservation agreement partners will commit to fund a study program to determine the impacts of selenium on desert pupfish. The objective of the study program will be to identify specific selenium thresholds at which pupfish survival or reproduction is adversely affected. These studies will include water-borne exposures but will focus on dietary exposures as dietary exposure is believed to be of greater importance in how selenium-induced effects are manifested in fish. The thresholds will be expressed in terms of tissue concentration, water concentration, or dietary concentration as appropriate based on the study results. In addition to evaluating the effects of selenium on pupfish, the study program also may investigate the appropriateness of using another fish species (e.g., sailfin molly, *Poecilia latipinna*) as a surrogate species for the desert pupfish. This will facilitate long-term monitoring by maximizing the ability to interpret the results of chemical analyses of samples collected in the pupfish drains. Sufficient funding will be provided to support the completion of the study program and identification of a selenium threshold within 7 years. A detailed study plan will be developed in cooperation with the Service and CDFG.

Concurrently, Reclamation and its conservation agreement partners will implement a monitoring program to establish baseline conditions in the drains in the Imperial Valley that discharge directly to the Salton Sea. The monitoring program will include selenium concentrations in water, sediments, and dietary components of the desert pupfish. If the study program includes the investigation of possible surrogate species, collections of the surrogate species will be made to determine tissue concentrations of selenium in these fish. In addition, pupfish presence will be monitored (see Pupfish Conservation Measure 3). A detailed monitoring plan will be developed in cooperation with the Service and CDFG.

Within 2 years of completion of the study program, Reclamation and its conservation agreement partners will meet with the Service and CDFG to review the results of the study program and the monitoring data. If the available information reviewed in this process indicates that the pupfish inhabiting the Imperial Valley drains that discharge directly to the Salton Sea are at risk from selenium, Reclamation will work in cooperation with IID, the Service and CDFG to identify and implement the best means for managing IID's drain channels to minimize potential selenium impacts on pupfish. Measures to be considered may include splitting combined drain channels (drain/operational water) to improve water quality, providing limited biological treatment, including use of discharge from created managed marsh habitat described below, and consolidating channels and blending flows.

Pupfish Conservation Measure 3: Management and Monitoring

In cooperation with its conservation agreement partners, Reclamation will carry out routine monitoring of pupfish presence to confirm continued presence in the drains and to develop information useful in adjusting management actions for this species. In cooperation with the Service and CDFG, Reclamation and its conservation agreement partners will develop a survey protocol that is appropriate for determining pupfish presence in the drains. As part of the baseline monitoring program, Reclamation and its conservation agreement partners will monitor pupfish presence in each of the pupfish drains for five to seven consecutive years to establish patterns of use and to augment baseline information. Prior to the development of a revised protocol, the existing protocol to survey pupfish will be used. If possible, the revised protocol and the existing protocol will be conducted concurrently to calibrate the two methods with each other.

The need for continued monitoring of water quality, sediment, dietary components and pupfish presence will be re-assessed during the review at the end of the study and baseline survey program. If it is determined that continued monitoring is necessary, Reclamation and its conservation agreement partners will work with the Service and CDFG to develop an appropriate long-term monitoring program.

Yuma Clapper Rail and California Black Rail

In the action area, Yuma Clapper Rail predominantly occurs on State and Federal refuges. Agricultural drains support limited use by clapper rails. Breeding is not verified in the drains, but rail presence is documented in surveys of drains during the breeding season. The California black rail is known to occur in seepage areas along the All American Canal, but its use of the drains has

not been documented. Its habitat affinities are similar to the Yuma clapper rail. The IID drainage system is estimated to contain about 63 acres of cattails. Common reed, tamarisk, and arrowweed are the predominant species of the remaining 589 acres of vegetation in the drainage system. Potential project impacts on rails consist of loss and degradation of cattail vegetation in drains through increased salinity and exposure to increased selenium concentrations in drains.

The acreage of cattails supported in the drains could potentially be reduced by 4 acres due to increased salinity, and an additional 23 acres of remaining cattail vegetation could be subjected to increased salinity levels that could stunt growth and reduce vigor of the plant. If fallowing is used to conserve water, there would be no change in salinity in drains and, therefore, no impacts to cattail vegetation. Under current conditions, average impairment in rail egg hatchability due to selenium levels is 3 percent. As a result of IID's water conservation activities, hatchability could be impaired up to 6 percent, comprising a 3 percent increase above the current condition. Use of fallowing as a water conservation method would reduce the level of impairment due to increased selenium concentrations in the drains.

Rail Conservation Measure 1: Salinity Impacts

Thirty-one acres of high quality managed marsh will be created to offset potential salinity impacts (2:1 mitigation for 4 acres lost, and 1:1 mitigation for the additional 23 acres of reduced quality habitat). In cooperation with its conservation-agreement partners, Reclamation will work with the Service and CDFG to determine the design and location of these marshes. Design considerations will include the needs of both rail species. Based on concerns about the availability of suitable quality water in the Imperial Valley, it is anticipated that the location of these marshes will be elsewhere in the action area.

Rail Conservation Measure 2: Selenium Impacts

Forty-two acres of additional high quality managed marsh habitat will be created to offset the potential selenium impacts on rail egg hatchability. If feasible, this marsh habitat will be located adjacent to the managed marsh habitat discussed in Rail Conservation Measure 1. The created habitat will be monitored for selenium and salinity if located in the vicinity of the Salton Sea. The total amount of 73 acres of habitat will be created within 10 years of completion of this consultation. Design considerations will include the needs of both rail species. The selenium concentration of the water used to support the managed marsh habitat would be water of the same selenium concentration as lower Colorado River water or that meets an EPA criterion for protection of aquatic life that has received a "No Jeopardy" determination from the Service, whichever is greatest.

Rail Conservation Measure 3: Management and Monitoring

A long-term adaptive management and monitoring plan will be developed for the mitigation marsh and submitted to the Service and CDFG for review and approval prior to initiation of habitat creation activities. The management plan will consider the requirements of both the Yuma clapper rail and the California black rail. An acceptable monitoring plan for the mitigation marshes, which

specifies performance criteria for vegetation growth and the frequency and techniques used in monitoring including rail surveys, will be developed. The created marsh habitat will be maintained and managed for at least the duration of the QSA transfers. Water conservation activities that continue to cause take of listed species beyond the term of the QSA water transfers would require continued mitigation.

Following creation of the managed marsh habitat, the created habitat will be surveyed for Yuma clapper rails by Reclamation and its conservation agreement partners. The surveys will be conducted annually for 5 years following creation of the managed marsh. After the initial five-year survey period, the rail surveys will continue at the same frequency that clapper rail surveys are conducted on the federal wildlife refuge but no less frequently than once every five years. Currently, the federal wildlife refuge is surveyed annually for clapper rails. Surveys for Yuma clapper rails will follow the prevailing protocol as outlined in Attachment C. Reclamation and its conservation agreement partners will work with the Service and CDFG to further refine the survey protocol as needed for the created habitat.

Reclamation, its conservation agreement partners, the Service, and CDFG will annually review results of rail surveys and assess the effectiveness of the managed marsh in providing habitat for clapper rails. In evaluating the effectiveness of the marsh in providing habitat for clapper rails, Reclamation, its conservation agreement partners, the Service, and CDFG will consider the use of the State and Federal refuges by clapper rails as compared to the managed marsh. By considering and comparing use (occurrence, abundance, and life history functions) of the managed marsh and at State and Federal refuges (if available), it will be possible to assess whether the managed marsh is providing for the species, while at the same time taking into account stochastic factors not attributable to management. Management will be adjusted as necessary based on the results of the annual surveys.

The managed marsh will be considered successful if Yuma clapper rails and California black rails have been found to use the marsh during the breeding season at any time during the 5 years following the creation of the marsh. If it is determined that either one or both of the species did not use the managed marsh during the 5 years, then Reclamation and its conservation agreement partners will meet with the Service and CDFG to identify possible changes needed in the management of the marsh habitat.

Examples of actions that could be taken in adjusting management include, but are not limited to:

- Changes in flooding regime
- Vegetation management activities (e.g., replacement of failed plantings, burning, discing, flooding)
- Minor earth-moving activities within the managed marsh units
- Changes in water levels
- Predator control
- Invasive species control

Southwestern Willow Flycatcher

Although Southwestern Willow Flycatchers have been observed in low numbers during migration season, no breeding has been documented within the action area. Willow flycatchers have been reported using tamarisk and common reed along the Salton Sea and agricultural drains, and in seepage communities adjacent to the East Highline Canal during migration. In other areas within its range, Southwestern Willow Flycatcher has been documented using tamarisk stands for breeding, if these stands contain areas of saturated soils or standing water. Water conservation activities undertaken by IID have the potential to impact tamarisk stands within the action area. However, it is unknown if any of these stands have the necessary components to be considered suitable Southwestern Willow Flycatcher breeding habitat at this time.

Willow Flycatcher Conservation Measure 1: Evaluate Habitat

All potential cottonwood-willow and tamarisk stands will be evaluated for Southwestern Willow Flycatcher breeding habitat suitability. Using the Anderson and Ohmart classification system (1994), each Saltcedar III and IV and each Cottonwood-willow I, II, III, and IV stand will be evaluated for suitability based on density, structure, and presence of standing water or saturated soils during the breeding season. Suitable breeding habitat will be identified based on characterizations provided in the draft Southwestern Willow Flycatcher Recovery Plan.

These evaluations will take place prior to any IID water conservation activities which could impact tamarisk habitat. Upon completion of this initial evaluation, a specific protocol for the habitat monitoring (identified below as Conservation Measure 2) will be developed in consultation with the Service and CDFG. This protocol will address the timing and duration of monitoring activities and other details as required.

Willow Flycatcher Conservation Measure 2: Suitable Habitat Monitoring

If suitable Southwestern Willow Flycatcher breeding habitat is identified during Conservation Measure 1, this habitat will be monitored to quantify changes in the amount and quality of habitat. If suitable breeding habitat is lost or the quality of the habitat declines as a result of IID's water conservation activities so that it is no longer considered suitable breeding habitat, this loss will be offset through the creation and/or acquisition and preservation of higher quality, native riparian replacement habitat at a 1:1 ratio. Reclamation and its conservation agreement partners will work with the Service and CDFG to develop the specific survey protocol necessary to monitor and quantify changes in the amount and quality of breeding habitat in the future. A general approach is provided in Attachment A.

Willow Flycatcher Conservation Measure 3: Management and Monitoring of Habitat

A long-term adaptive management and monitoring plan will be developed for any replacement habitat whether created or acquired. This plan will include monitoring of all of the same characteristics of the habitat used in Measure 1 to determine suitability for breeding by southwestern willow flycatchers. The success criteria will be based on these suitability

characteristics such that the created or acquired habitat can be documented to include the suite of characteristics that makes it suitable for southwestern willow flycatcher breeding. This plan will be developed in consultation with the Service and CDFG. Specific locations for the replacement habitat would be identified in consultation with the Service and CDFG and would be located in the Salton Trough or the lower Colorado River corridor.

Willow Flycatcher Conservation Measure 4 - Take Minimization During Construction

IID could install seepage recovery systems along the East Highline Canal or lateral interceptors to capture operation discharges in the delivery system to conserve water. If suitable breeding habitat for southwestern willow flycatchers is identified in the seepage communities adjacent to the East Highline Canal or in locations to be impacted by lateral interceptor construction, removal of suitable habitat in association with these construction activities will be scheduled to occur outside the breeding season for the southwestern willow flycatcher. Specifically, removal of habitat would not occur between April 15 and August 15.

California Brown Pelican

Most California Brown Pelican use of the Salton Sea is by post-breeding visitors, with more limited use for wintering. These visitors are mostly young birds that disperse northward from breeding areas in the Gulf of California (Hazard, pers. comm. with CH2MHill). The primary mechanism through which IID's water conservation activities could result in take of California brown pelicans at the Salton Sea is a reduction in fish abundance.

Brown Pelican Conservation Measure 1 -- Roost Site Creation

Reclamation, in cooperation with its conservation-agreement partners, will construct at least two roost sites for brown pelicans along the Southern California Coast. The objective of this conservation measure is to provide at least 2 major roost sites that in combination support roosting by at least 1,200 pelicans. The roosts will be sized to accommodate up to 1,000 pelicans each. A major roost site is defined as supporting at least 100 pelicans during June through October based on maximum counts. The roost sites are to be installed and functioning by 2018 and demonstrated to support at least 100 pelicans each and to support at least 1,200 pelicans in combination. They will be maintained through 2048.

The two required roosts will be located in South San Diego Bay and in the outer harbor of Santa Barbara unless future investigations determine installation of roost sites at these locations to be infeasible. A barge or similar structure will be anchored to create a roost site in the outer harbor in Santa Barbara. Large numbers of brown pelicans previously roosted on a barge in the outer harbor until the owner of the barge removed it (American Trader Trustee Council 2001). Thus, this measure would focus on restoring this roost site. The second roost site will be created in South San Diego Bay by installing one or more structures suitable for roosting pelicans and appropriate to the site-specific conditions in the bay. Few roost sites are present in the South San Diego Bay area which could limit use of this area by pelicans. Establishing a roost in this area could support

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increased use by brown pelicans and also benefit juveniles dispersing from Mexico as they move along the coast.

The roost sites will be monitored annually for use by brown pelicans beginning one year after their installation (i.e., 2018). Monitoring will consist of monthly day and night roost surveys during June through October. Monitoring will be used to determine 1) if the created structures are serving as a major roost (i.e., more than 100 pelicans) and 2) if they are major roosts, are they, in combination, supporting at least 1,200 pelicans. Based on the five years of monitoring, a roost site will be considered a major roost if the maximum number observed was at least 100 pelicans during 3 out of 5 years. Similarly, if the two roost sites in combination support at least 1,200 pelicans during any of the 5 years based on maximum counts, the conservation measure will be considered successful. Because monitoring of the roosts will be initiated one year after they are installed, data will be available on an annual basis to allow an early assessment of whether the objective of supporting 1,200 pelicans is likely to be achieved with the initial two roosts or if additional roosts will need to be installed.

If a roost site does not support at least 100 pelicans, Reclamation and its conservation agreement partners will work with the Service and CDFG to modify the roost site to achieve the target. If modifications to the roost site are not likely to achieve the objective, Reclamation and its conservation agreement partners will work with the Service and CDFG to identify one or more locations to establish additional roosts sites as necessary to establish two major roosts. Similarly, if the two roosts in combination do not support at least 1,200 pelicans, Reclamation and its conservation agreement partners will work with the Service and CDFG to modify the roost sites or establish additional roost sites until at least two major roosts are established and all created major roosts combined support at least 1,200 pelicans by 2023. The Service and CDFG will consider the ongoing use of the Salton Sea by brown pelicans to determine if an extension of this date is appropriate. Attachment B summarizes information on locations along the Southern and Central California Coast where roost sites could be created or improved in the event that the initial two roosts do not achieve the objectives.

The roost sites will continue to be monitored annually after the initial five year effectiveness monitoring period. Reclamation and its conservation agreement partners will work with the Service and CDFG to develop an appropriate level of intensity for the monitoring. During the course of the proposed fish and wildlife conservation measures, the frequency for the monitoring may be reduced with approval from the Service and CDFG. If the monitoring data show a decline in use of a roost site by brown pelicans to a level below the target population (i.e., 1,200 pelicans) and the decline in use can be reasonably attributed to the characteristics or management of the roost site, then Reclamation and its conservation agreement partners will work with the Service and CDFG to identify and implement actions to re-establish conditions to support 1,200 pelicans.

Interrelated Actions

The IID, CVWD, and MWD negotiated the terms of the QSA. Although not a signatory to the proposed QSA, SDCWA is a member agency of MWD. SDCWA participated in the QSA negotiations and benefits or is impacted by certain of its terms. The QSA is a consensual transfer

of Colorado River entitlement based on a series of proposed agreements, which include water conservation/transfer and exchange projects among IID, CVWD, and MWD. The proposed QSA provides part of the mechanism for California to reduce its water diversions from the Colorado River in normal years to its apportioned amount of 4.4 MAF under the California Plan. The implementation of the proposed QSA, which includes water conservation and water transfers from agricultural use to principally urban use, would result in a net reduction of Colorado River diversions to California.

If the QSA is fully approved by the participating agencies and the conditions precedent to implementation of the QSA are satisfied or waived, SDCWA would be limited to the primary amount (130 to 200 thousand acre-feet/year (KAFY)) of transferred water under the IID/SDCWA Transfer Agreement. CVWD would have an option to acquire up to 100 KAFY, and MWD would have an option to acquire any portion of the 100 KAFY that CVWD elects not to acquire. The federal approvals required to implement water deliveries in accord with the QSA will be evidenced by the Secretary's execution of the Implementation Agreement.

The QSA also includes the allocation of conserved water to be generated by other projects that have been assessed in other final CEQA/NEPA documentation and/or section 7 consultations. The 1988 IID/MWD Agreement and subsequent agreements and modifications were the subject of a CEQA analysis that determined that the impacts of that project were not significant. There was no Federal action needed to carry out the requirements of these agreements, and all water conservation activities required as part of these agreements have been implemented. The construction projects required to line the All American and Coachella Canals have already undergone consultation. The MWD and the San Luis Rey Indian Tribes (as a result of a settlement agreement) will receive conserved water from these two projects. The consultation process for these two projects did not address receipt and use of the water by these entities on the coast, nor is it included here. The CVWD/MWD State Water Project Transfer/Colorado River Exchange is considered outside of this proposed action and is not addressed in this consultation. Other water caps and shortage sharing agreements included in the QSA also are not addressed in this analysis. This consultation is limited to the fish and wildlife conservation measures described above and the water conservation activities required of IID to implement the requirements of the IID/SDCWA Water Conservation and Transfer Agreement and the QSA (including capping their water use at 3.1 MAF/year). Receipt and use of the water by SDCWA, CVWD, and MWD is not addressed. SDCWA and MWD have stated that their use of the water will not result in additional impacts as it constitutes replacement for surplus water needed to meet existing needs (CH2MHill 2002, MWD 2000). CVWD has begun discussions with the Service and CDFG regarding addressing the impacts of their use of the water through participation in the Coachella Valley Multi-Species Habitat Conservation Plan or an independent HCP for the receiving area.

Potential IID Water Conservation Activities Resulting from Proposed QSA Water Transfers

Water conservation or other water use activities will be implemented by IID to conserve the water to be delivered pursuant to the QSA and the California Plan for the Colorado River. Implementation of water conservation activities would occur gradually, based on schedules defined in the QSA. Water conservation would likely be accomplished through a combination of on-farm

and system-based conservation methods. On-farm methods consist of actions taken by individual farmers or landowners to conserve water under voluntary water conservation agreements with IID. System-based conservation methods consist of actions that may be undertaken by IID to conserve water. The exact mix of conservation methods employed may vary over the life of the water transfer term and will be determined by IID. Because these activities are anticipated to have adverse effects to listed species that would otherwise be prohibited by the ESA, these activities could not be implemented but for the proposed fish and wildlife conservation measures described above and the resulting incidental take exemption provided herein. The following sections describe the suite of conservation methods that could be implemented by IID to develop water for transfer.

15-Year Minimization Plan

This plan requires that the transfer not materially affect the salinity of the Salton Sea during the first 15 years of the transfer. This has been required by the State of California and will result in impacts to Salton Sea species being minimized during that time. IID will deliver a total of 1.0 million acre-feet (MAF) to SDCWA over these first 15 years of the transfer. The volume will be ramped up at 10,000 acre-foot intervals, and IID will transfer a volume of 100,000 acre-feet in years 11 through 15 of the transfer. This volume will be achieved through fallowing and will require that 25,000 to 30,000 acres be fallowed during this period in order to deliver water to the SDCWA and the Salton Sea.

The transfer of water from IID to CVWD will commence in 2008. This water will be conserved through efficiency conservation, and the volume of water will be ramped up at a rate of 4,000 to 5,000 acre-feet/year (AFY). The total volume to be made available to CVWD during the first 15 years of the transfer is 240,000 acre-feet (AF). This conservation and transfer results in a reduction of inflows to the Salton Sea of 160,000 AF during the first 15 years. Given the difference in salinity between the baseline and this project is approximately 1 ppt in year 15, this was not considered a material effect to the Salton Sea.

MWD has offered to provide water generated by their transfer agreement with Palo Verde Irrigation District (PVID) in order to meet the requirement that the water conservation and transfer program not materially affect the Salton Sea salinity for 15 years. MWD will make up to 390,000 AF available to SDCWA over the first 15 years of the transfer on a schedule to be determined by MWD. This project was evaluated under a separate California Environmental Quality Act (CEQA) process, and PVID has determined that no take of listed species will occur in the Palo Verde Valley as a result of that project. Therefore, this project is not included as part of this consultation, and no take is authorized.

As part of the requirement to keep the Salton Sea from materially deviating from the baseline salinity, the water agencies are considering substituting drain water inflows with groundwater from the East Mesa area. The agreement allows for this to be pursued provided that it is accomplished at no cost to IID. In this case, IID would be able to increase its deliveries to SDCWA and reduce the fallowing requirement. The use of groundwater from East Mesa has not been evaluated and will require additional environmental compliance prior to its implementation. This action is not included in the current consultation process.

On-Farm Water Use and Conservation

The conservation of up to 300 KAFY of water in the IID service area will require changes in current farming practices and may result in substantial capital investments in water conservation equipment and technologies. Farmers may voluntarily enter into agreements with IID, thereby committing to the implementation of water conservation activities. These activities would require farmers to make capital investments in various types of water conservation equipment and facilities. In many cases, farmers will be required to obtain financing for construction costs to implement and maintain conservation equipment. The farmers' ability to obtain financing will depend on the estimate of the direct and indirect costs of implementing water conservation activities.

Many farmers own land in the IID service area. Some lease their land from third parties, and others lease their land from IID. This biological/conference opinion includes potential impacts from water conservation activities on land in the IID service area, regardless of who owns the land and who conducts the activities. The options for conserving water that are available to farmers generally fall into these categories:

1. Installation of structural or facility improvements, or conversion to irrigation systems that increase efficiency and reduce water losses
2. Irrigation management
3. Land use practices

Installation of Structures/Facilities and Conversion of Irrigation Systems

On-farm water conservation can be achieved through various techniques using existing technology. On-farm water conservation activities may include:

- Tailwater return systems
- Cascading tailwater systems
- Level basins
- Shorten furrows and border strip improvements
- Narrow border strips
- Cutbacks
- Laser leveling
- Multi-slope
- Drip irrigation

The techniques for achieving water conservation would be at the discretion of the individual farmer. It is expected that some combination of the techniques listed would be employed.

Irrigation Management

Certain farmers may be able to conserve water and cultivate the same acreage through better irrigation management without constructing facilities or changing irrigation methods. Irrigation management refers to controlling the timing and amount of each irrigation application to provide adequate crop water for maximum yield and to achieve adequate soil leaching. On-farm irrigation management will continue to evolve as the science of crop/soil water develops and as farmers understand irrigation management better and increase their practical use of it. As greater demands are put on agricultural areas to conserve more water in California, irrigation water management will become a more important tool for farmers.

Land Use Practices

Fallowing can be described as the reduction or cessation of certain farmland operations for a specified or indefinite period of time. For this analysis, fallowing is defined as:

- Long-term land retirement (greater than 1 year), whereby crop production ceases indefinitely or during the term of the water conservation and transfer agreements. A cover crop may be maintained during the period of inactivity, or the land may be returned to natural vegetation.
- Rotational fallowing, whereby crop production ceases for 1 calendar year. No water is applied, and no cover crop is grown.
- Single crop fallowing, whereby multiple crops are reduced to a single crop rotation on an annual or longer term basis.

IID's Board of Directors adopted Resolution No. 5-96, stating that IID will not support fallowing programs for purposes of transferring water. However, there is no prohibition of fallowing under the terms of the QSA. Fallowing may be considered a potentially viable method to achieve water conservation in IID's service area. IID will not pay farmers to change crops in order to reduce water use (John Eckhardt, formerly of IID, pers. comm.). It is their position that market forces, not water use, will continue to drive crop choice in the Imperial Valley.

System-Based Water Conservation Activities

As part of IID's water conservation and transfer programs, IID may choose to implement operational and structural improvements to conserve water by preventing unnecessary losses from the delivery system. The specific improvements that would be undertaken are uncertain; however, the types of improvements that IID could pursue include the following:

- Installing additional lining in canals and laterals
- Replacing existing canal linings as normal maintenance to prevent leakage
- Automating flow control structures
- Installing check gates in the laterals that are automated or manually operated
- Installing non-leak gates
- Installing additional lateral interceptors

- Installing additional pipelines
- Installing additional reservoirs, including small, mid-lateral reservoirs to provide temporary water storage and increase delivery efficiency
- Developing water reclamation systems
- Installing pump or gravity-operated seepage recovery systems

Canal Lining and Piping

Canal lining consists of lining canals with concrete or using pipelines to reduce seepage. About 537 miles of canals are currently unlined. To line a canal, the existing canal is filled in and then trenched to form a trapezoidal channel. Concrete is then installed on the banks and bottom of the channel using a lining float. Construction activities can be conducted in the canal's right-of-way and impact an area about 70 feet wide centered on the canal. The canal rights-of-way consist of either roads, embankments, or other disturbed ground. About 1 week is required to line a mile of canal. A component of the conservation activities proposed under the IID /SDCWA Transfer Agreement included lining in three canal sections in the IID service area totaling about 1.74 miles.

Lateral Interceptors

A lateral interceptor system consists of new canals and reservoirs that collect operational spills from lateral canals. Lateral interceptors are lined canals or pipelines that generally run perpendicular to lateral canals at their terminus. The lateral interceptors capture operational spill water, unused water resulting from canal fluctuations, and return water from farmer delivery reductions or changes. The interceptors convey this captured water to regulating reservoirs, where the water can be stored and reused in another canal serving another delivery system as needed. IID has four systems in operation and potentially could enlarge or expand system capacity in response to the need to conserve water for transfer.

Installation of a lateral interceptor requires constructing and lining a canal, installing pipelines, and constructing a minimum 40-acre surface reservoir. An approximately 70-foot-wide area centered on the new interceptor would be impacted by the construction. The impacted area of the reservoir site would be only slightly larger than the reservoir itself. A component of the conservation activities proposed under the IID /SDCWA Transfer Agreement included installation of up to 16 lateral interceptors. The total acreage potentially impacted by construction of lateral interceptors could be about 1,480 acres (i.e., approximately 840 acres of canals and 640 acres of reservoir).

Reservoirs

Two types of reservoirs can facilitate water conservation: operational reservoirs (includes mid-lateral reservoirs) and interceptor reservoirs. Operational reservoirs are generally placed in locations to take advantage of delivery system supply and demand needs and, in some cases, include locations of historical canal spills. These reservoirs are used to regulate canal flows to match or optimize demand flows to supply flows. Conservation is achieved by reducing operational spills as a result of this mismatch of flows by storing excess supply water and then releasing this water in order to meet demand needs.

Interceptor reservoirs enhance lateral interceptor system operations. They are typically placed at the end of the lateral interceptor canals to store intercepted flows (operational discharges) for re-regulation rather than losing these flows to the drainage system. These stored flows are later released for use in other delivery system canals to meet water demand. These reservoirs would contain automated inlet and outlet structures that would enable the maintenance of the desired water flow. IID currently does not have any reservoirs in design, but could choose to construct these facilities in response to a 300 KAFY reduction in water delivery. Reservoirs would likely be 1 to 10 acres in size, with a capacity ranging from about 5 to 30 AF. It is assumed that construction of these reservoirs could encompass up to 1,000 acres total.

In addition to reservoirs constructed and operated by IID, farmers in the Imperial Valley may construct small regulating reservoirs to facilitate the conservation of water. These 1- to 2-acre reservoirs would be constructed at the upper end of agricultural fields and used to better regulate irrigation water applied to fields and to settle suspended solids prior to introduction into drip irrigation systems. These reservoirs would contain water only during irrigation operations, remaining dry during the remainder of the year. IID anticipates that these reservoirs could be used on up to 50 percent of the agricultural land in its service area. A single reservoir services about 80 acres of land. Up to about 5,900 acres of agricultural land could be converted to regulating reservoirs valley-wide.

Seepage Recovery Systems

To conserve water, IID could install seepage recovery systems adjacent to the East Highline Canal. Surface and subsurface recovery systems conserve water by collecting canal leakage in sumps along a canal and pumping the water back into the same canal.

In a surface drain recovery system, seepage is captured and conveyed through open channels to a concrete sump. From there, it is pumped back into the canal. Construction required to install a surface recovery system is minimal. For a surface recovery system, a small check structure would be constructed in the existing parallel drain to pond water to a depth of about 3 feet. A pump station would return water to the East Highline Canal. These systems are appropriate in locations where there is an existing drain that collects seepage and directs water to the drainage system.

In a subsurface recovery system, canal seepage flows are collected in a perforated pipe that directs the water to a concrete sump. From there, it is pumped back into a canal. Subsurface systems are proposed in areas lacking an existing parallel open drain. To install these systems, a trench is excavated, and a pipe is laid in place. The pipeline outlets to a collection well consisting of an 8-foot-diameter vertical pipe from which the water is pumped back to the delivery canal. Construction disturbs an area about 70 feet wide along the pipeline. Following completion of the system, a right-of-way of about 70 feet along the pipeline would need to be kept free of deep-rooted vegetation.

Operations and Maintenance Activities Conducted By IID

These actions are outside Reclamation's proposed action and are not interrelated to the fish and wildlife conservation measures. Operations and maintenance activities in and along the drains, canals, and other facilities operated by IID are ongoing and would be necessary with or without the water conservation and transfer program, with the exception of the maintenance of the canal linings, lateral interceptors, mid-lateral reservoirs, and seepage recovery systems installed as part of the program. Because these new facilities are expected to be located in areas not used by listed species or maintained in a condition that does not provide habitat for listed species, impacts to listed species from these operation and maintenance activities are not expected. The conditions that result from maintenance activities associated with existing facilities are considered to be part of the baseline and are not addressed in this consultation process.

Action Area

This biological opinion includes lands comprising the approximately 500,000 acres of IID's water service area in Imperial County, California, the Salton Sea (including lands owned by IID outside of its water service area that are currently submerged by the Salton Sea), and areas of the Coachella Valley that are adjacent to the Salton Sea. This area is illustrated on Figures 1-1 (IID) and 1-2 (Salton Sea). The Action Area also includes the lower Colorado River valley and the coastal California range of wintering California brown pelicans. Measures included in the willow flycatcher and the rail conservation packages may include habitat replacement along the lower Colorado River. Brown pelican conservation measures include enhancements of habitat on the coast to offset losses occurring at the Salton Sea.

STATUS OF THE SPECIES

Desert Pupfish

The desert pupfish is the largest of the North American pupfish. Although they may reach 3 inches (7.6 centimeters) in length, they are seldom more than half that size. They have a smoothly rounded body shape and narrow, vertical dark bars on the sides (Schoenherr 1992). Breeding males are blue on the tops and sides, and have yellow to orange fins. Females and juveniles have tan to olive colored backs and silvery sides. Pupfish typically occupy the shallow waters of springs, small streams and marshes. Desert pupfish are adapted to harsh desert environments and capable of surviving extreme environmental conditions (Moyle 1976; Lowe *et al.* 1967). Although desert pupfish are extremely hardy in many respects, they prefer quiet water with aquatic vegetation (Schoenherr 1992), and they cannot tolerate competition or predation and are thus displaced by exotic fishes (USFWS 1986).

Tolerance for environmental extremes is a notable feature of the desert pupfish. This is important because desert habitats experience wide variations in temperature, salinity, and dissolved oxygen. The critical thermal maximum of 44°C for this species is the highest ever recorded for a species of fish. This ability to tolerate hot water also enables them to live in hot springs. In such a habitat, the desert pupfish may feed on blue-green algae that live in water hotter than its critical thermal

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maximum. Also recorded for the desert pupfish is the lowest tolerated minimum for dissolved oxygen, at 0.13 mg/l. The species' range of tolerance for salinity is also high. Adult desert pupfish tolerate water from distilled to 70 g/l (twice the concentration of seawater) (Schoenherr 1992). Barlow (1958) reported that adult desert pupfish survived salinity as high as 98,100 mg/L in the laboratory.

Desert pupfish are opportunistic feeders. Their diet, which varies seasonally with food availability, consists of algae, minute organisms associated with detritus, insects, fish eggs, and small crustaceans (Cox 1972; Naiman 1979). In the Salton Sea, ostracods, copepods, and occasionally insects and pile worms are taken (Moyle 1976). Adults are not considered food for piscivorous birds or fish because of their sparse density (Walker *et al.* 1961; Barlow 1961).

The historic range once extended from the Gila River tributaries in southern Arizona and northern Sonora, westward to the Salton Sea area and southward into the Colorado River delta region in Sonora and Baja California, Mexico (Minckley 1980; Miller 1948; Miller and Fiuman 1987). It also formerly occurred in the slow-moving reaches of some large rivers, including the Colorado, Gila, San Pedro, Salt, and Santa Cruz Rivers. Where suitable habitat was available, desert pupfish probably occurred in the Agua Fria, Hassayampa, and Verde Rivers of Arizona as well. Distribution of desert pupfish was widespread, but probably not continuous within its historic range (CH2MHill 2002).

Currently, this species is known from only a few locations in California and Mexico. The only remaining natural populations are found in a few sites in the Salton Sea drainage, and the Colorado River Delta in Baja California and Sonora, Mexico. Specifically, it is found in San Felipe Creek and its associated wetlands in Imperial County and Salt Creek in Riverside County, both Salton Sea tributaries (Nicol *et al.* 1991), more than fifty localities in drains and shoreline pools on the southern and eastern margins of the Salton Sea (Lau and Boehm 1991), and in small pools in the upper Coachella Valley. Sutton (1999) observed desert pupfish movement between the Salton Sea and nearby drains. Pupfish were observed moving from both irrigation drains and Salt Creek downstream into shoreline pools. The reverse movement from shoreline pools upstream into both drains and Salt Creek was also observed. Decreases in the size of shoreline pools during seasonal fluctuations in water levels may affect fish health and/or force pupfish to seek other habitat. Thus, the connectivity between habitat types may be necessary to prevent pupfish from becoming stranded in habitats that cannot sustain them for prolonged periods (Sutton 1999). These observations indicate the importance of agricultural drains as pupfish habitat and the potential for pupfish to use shoreline aquatic habitats as corridors. This potential movement may be important in providing genetic mixing between various populations.

Specifically, desert pupfish prefer backwater areas, springs, streams, and pools along the shoreline of the Salton Sea. Desert pupfish habitat occurs in pools formed by barnacle bars located in shoreline areas of the Salton Sea and in Salt Creek. Barnacle bars are deposits of barnacle shells on beaches, shoreline areas, and at the mouths of drains that discharge to the Salton Sea. The bars form pools that provide habitat for desert pupfish (IID 1994). Habitat for desert pupfish also occurs in the mouths of drains discharging directly to the Salton Sea, in San Felipe Creek, and in Salt Creek.

Spawning at the Salton Sea takes place between late March and late September when water temperatures exceed 20° C (Moyle 1976; UCLA 1983). Pupfish can spawn several times during this period. Adult male desert pupfish are very territorial during the spawning season such that schools consist either entirely of adult females or entirely of juveniles. Desert pupfish usually set up territories in water less than 1 m (3 feet) deep and associated with structure (Barlow 1961). Territoriality is highest in locations with large amounts of habitat, high productivity, high population densities, and limited spawning substrate (USFWS 1993). Desert pupfish prefer water 18 to 22 centimeters (cm) deep for egg deposition (Courtois and Hino 1979). Depending on size, a female pupfish may lay 50 to 800 eggs or more during a season (Crear and Haydock 1971). The eggs hatch in 10 days at 20° C, and the larvae start feeding on small invertebrates within a day after hatching (Crear and Haydock 1971). Larvae are frequently found in shallow water where environmental conditions are severe.

Although remarkably tolerant of extreme environmental conditions, the desert pupfish is threatened throughout its native range primarily because of habitat loss or modification, pollution, and introductions of exotic fishes (USFWS 1986). Improper grazing can increase turbidity by increasing erosion and reducing riparian vegetation. Water pollution from the application of pesticides in proximity to desert pupfish habitat is also an important factor, contributing to the decline of the Quitobaquito subspecies (Miller and Fuiman 1987). Droughts can cause the springs and headwaters that this species inhabits to dry up. Water development projects can degrade desert pupfish habitat by removing water through groundwater pumping, diversion, and irrigation. The reduction of the amount of water in these habitats can create situations where the desert pupfish are at a competitive disadvantage with exotic fish species.

Currently, there are two recognized subspecies of the desert pupfish, *Cyprinodon macularius macularius* and *C.m. eremus*. Both subspecies were included in the federal listing of the desert pupfish as endangered on March 31, 1986 (51 FR 10842, USFWS 1986). The population is defined as occurring in Quitobaquito Springs, Arizona; Salton Sink, California; El Doctor, Laguna Salada, and Cerro Prieto in Baja California, Mexico; and Rio Sonoyta in Sonora, Mexico (58 FR 6526, USFWS 1993). Only the *C.m. macularius* subspecies occurs in the proposed project area. In California the San Felipe Creek system, including San Sebastian Marsh, and Salt Creek provide natural habitat for desert pupfish populations.

Recently, Echelle *et al.* (2000) used mitochondrial DNA variation to describe the genetic structure of *C. macularis*, which represents two evolutionarily divergent entities that should be recognized as two monophyletic groups: Rio Sonoyta/Quitobaquito and Salton Sea/Colorado River Delta. Although the same haplotype was common throughout both the Salton Sea and Colorado River Delta regions, the distribution of less common haplotypes indicates a lack of wholesale intermixing. A conservative management approach would avoid intermixing pupfish between these two regions beyond what occurs naturally. Although the Salton Sea and Colorado River Delta revealed no significant differences among paired samples within and between the two regions, they also shared no haplotypes with samples from the Rio Sonoyta/Quitobaquito regions. This suggests long, mutually exclusive evolutionary histories (Neigel and Avise 1986) for the two monophyletic groups, a hypothesis that is consistent with geological history. Although there were relative uncommon haplotypes found in the Salton Sea and Colorado River Delta region, there were no

unique haplotypes to just the Salton Sea region. This is probably attributable to recent gene flow occurring between the Salton Sea and Colorado River Delta region due to population expansion and dispersal with alternating population declines, isolation, and extinctions (Dunham and Minckley 1998). The low level of diversity exhibited by the two regions could also be attributable to a bottleneck effect or founder event. More recent separation of the Rio Sonoyta and Quitobaquito Springs populations would explain the lack of significant difference in haplotype frequencies between samples from these two areas. However, Echelle *et al.* (2000) recommends conservative management with no artificial intermixing of the populations for the Rio Sonoyta and Quitobaquito regions.

Critical habitat has been designated for this species at San Felipe Creek and two of its tributaries, Carrizo Wash and Fish Creek Wash [50 CFR 17.95 (e), USFWS 1986]. A total of approximately 770 acres of critical habitat has been designated. A draft recovery plan issued on January 29, 1993 (58 FR 6526, USFWS 1993) includes 3 goals to aid in the recovery of the desert pupfish: 1) secure, maintain (including habitat and water rights), and replicate all extant natural populations; 2) acquire additional natural habitats; and 3) to establish replicates in the most natural habitats within the probable historic range. Further objectives include determination of habitat and biological criteria, acquisition of life history information, development and implementation of genetic protocol, population monitoring, and information and education. In the Salton Trough, this species would benefit from a reduction in the populations of exotic fish species that compete with or prey upon the desert pupfish. Efforts are ongoing by CDFG to maintain pupfish habitats in San Felipe and Salt Creeks free of exotic fish species. Control of exotic fish in the drains is not likely possible, but conditions that favor pupfish over the exotic species (shallow depths in particular) could be targeted to reduce the impacts of exotic fish species on desert pupfish in the drains. CDFG and the Bureau of Land Management have been implementing measures that reduce tamarisk stands around San Felipe and Salt Creeks to maintain adequate flows for desert pupfish in these areas. This is an ongoing need.

Yuma Clapper Rail

The Yuma clapper rail is the size of a crow, with long, gray-brown legs and toes. The orange bill is long, thin, and slightly down-curved. The head, neck, and breast are gray-brown, and the back feathers are darker brown with gray centers. Both the flanks and the undertail covert feathers are distinctly marked with alternate black and white bars. Males and females are similar in plumage coloration. Compared with the other dozen or so described subspecies, its plumage is less richly colored (paler, with more olive and gray tones) and its bill more slender (Dickey 1923). The body is laterally compressed, the tail and wings are noticeably short, and legs are large and strong, all adaptations that allow birds to run through dense weeds or swim underwater to avoid danger.

Yuma clapper rail habitat is characterized by cattail (*Typha*), bulrush (*Scirpus*), or tule stands, and shallow, slow-moving water near high ground. Cattail and bulrush stands are often dissected by narrow channels of flowing water that may be covered by downed vegetation. These open channels are important for foraging. Rails commonly use areas with low stem densities and little residual vegetation. They are also found in the ecotone between emergent vegetation and higher ground, such as the shoreline, channel edge, or hummocks in a marsh. In studies conducted along

the lower Colorado River, rails were found to use areas far from a vegetative edge during early winter (Conway *et al.* 1993). The depth of water used by clapper rails also varied with season, with shallower water used during the breeding season, and water of moderate depth used during the winter. Although clapper rails are often found in larger stands of vegetation, they have also been found to use patches of habitat within agricultural drains (Bennett and Ohmart 1978).

Clapper rails prey upon a variety of small invertebrate and fish species that inhabit marshy areas. The Yuma clapper rail has a diverse diet. It has been documented to feed on a variety of invertebrates and some vegetation. Included in its diet are crayfish, fresh water prawns, weevils, isopods, clams, water beetles, leeches, damselfly nymphs, small fish, tadpoles, seeds, and twigs. Based on the available information, crayfish of the genera *Procambarus* and *Oropectus* appear to make up the majority of its food intake along the Colorado River (Ohmart and Tomlinson 1977). Similar crustaceans are taken at the Salton Sea, and the abundance of these animals may be a better predictor of rail population densities than vegetation (Anderson and Ohmart 1985; Patten *et al.*, in press). Reported rail densities vary widely. Bennett and Ohmart (1978) reported rail densities in the Imperial Valley of 0.9 to 6.3 rails/10 hectares (3.9 to 27.4 acres/rail). Todd (1986) reported range size in Mittry Lake averaged 2.5 acres/rail (5.0 acres/pair). In that same study Todd determined that the range size along the Gila River was 0.3 to 9.0 acres. Anderson and Ohmart (1985) reported a home range size of 18.5 acres/pair.

The Yuma clapper rail is one of seven clapper rail (*Rallus longirostris*) subspecies presently recognized in the western United States and the Pacific Coast of Mexico (American Ornithologists Union 1957), and it is one of three subspecies of federally endangered western clapper rail populations. It occurs primarily in the lower Colorado River Valley in California, Arizona, and Mexico and is a fairly common summer resident from Topock south to Yuma in the U.S. and at the Colorado River Delta in Mexico. There are also populations of this subspecies at the Salton Sea in California, and along the Gila and Salt Rivers to Picacho Reservoir and Blue Point in central Arizona (Rosenberg *et al.* 1991). In recent years, individual clapper rails have been heard at Laughlin Bay and Las Vegas Wash in southern Nevada (NDOW 1998). Population centers for this subspecies include Imperial Wildlife Management Area (Wister Unit), Sonny Bono Salton Sea NWR, Imperial NWR, Cibola NWR, Mittry Lake, West Pond, Bill Williams Delta, Topock Gorge, and Topock Marsh. The USFWS (1983) estimated a total of 1,700 to 2,000 individuals throughout the range of the subspecies. Between 1990 and 1999, call counts conducted throughout the subspecies range in the U.S. have recorded 600 to 1,000 individuals. In 1985, Anderson and Ohmart (1985) estimated a population size of 750 birds along the Colorado River north of the international boundary. A substantial population of Yuma clapper rails exists in the Colorado River Delta in Mexico. Eddleman (1989) estimated that 450 to 970 rails inhabited this area in 1987. Piest and Campoy (1998) reported a total of 240 birds responding to taped calls in the Cienega de Santa Clara region of the Delta. These counts are only estimates of the minimum number of birds present. The population is probably higher than these counts show, since up to 40 percent of the birds may not respond in call surveys (Piest and Campoy 1998). Based on the call count surveys, the population of Yuma clapper rails in the U.S. appears stable (USFWS unpublished data). The range of the Yuma clapper rail has been expanding over the past 25 years, and the population may be increasing (Ohmart and Smith 1973; Monson and Phillips 1981; Rosenberg *et al.* 1991; McKernan and Braden 1999). A recent genetic analysis showed that this

subspecies is outbred; population numbers of the Yuma clapper rail have not become low enough to reduce genetic diversity (Bureau of Land Management 2001).

The Yuma clapper rail breeds from March to July in marshes along the Colorado River from the Nevada/California border south to the Colorado River Delta region in Mexico. Chicks generally fledge by mid-September (Eddleman and Conway 1998). It builds its nest on a raised platform of vegetation concealed in dense marsh vegetation (Patten *et al.*, in press). Males may build multiple nests, and the female chooses one for egg-laying. Alternate nests are used as platforms for loafing, preening, and as brood platforms, but may also be useful for incubation if predators or high water disturb the primary nest (Eddleman and Conway 1994). Populations of this species occur in the Palo Verde and Imperial valleys. This subspecies is partially migratory, with many birds wintering in brackish marshes along the Gulf of California but some remain on their breeding grounds throughout the year (Bureau of Land Management 2001). Yuma clapper rails are found around the Salton Sea, and in agricultural drains and canals that support marsh vegetation (i.e., cattail, giant bulrush, alkali bulrush, and common reed). This subspecies breeds only in the lower Colorado River Valley and in the Salton Sink, the latter area holding about 40% of the United States population (Setmire *et al.* 1990). The breeding site for the largest population of the Yuma clapper rail in the United States is at the Wister unit of the CDFG Imperial Wildlife Area, near the Salton Sea. The sea's elevation is important to the Yuma clapper rail (USDOI 1998) as clapper rails use shallow freshwater habitat that has formed at the mouths of many of the inflows to the Salton Sea. Yuma clapper rails avoid deeper water because it increases juvenile mortality (CDFG 1990).

The Yuma clapper rail apparently expanded its range in the early 1900's in response to changes in the vegetation along the Colorado River. Damming and associated changes in hydrology induced vegetation changes in some areas that favored rails. At the same time, damming and diversion of the Colorado River reduced the amount of water flowing into the Colorado River Delta, and reduced the availability of rail habitats in the Delta. Approximately two-thirds of the formerly extensive marshlands of the Delta disappeared following completion of Hoover Dam (Sykes 1937).

Yuma clapper rail habitat has been further affected by channelization, fill, dredging projects, bank stabilization, and water management practices along the Colorado River. Three Fingers Lake and Davis Lake were lost as Yuma clapper rail habitat from river channelization (USFWS 1983), but recently may have been reconnected to the river (Leslie Fitzpatrick, USFWS, pers. comm.). Cibola Lake experienced marsh destruction when channelization work was completed for that stretch of the river, but it has been subject to ongoing restoration efforts (Lesley Fitzpatrick, USFWS, pers. comm.). Rail habitat has also been adversely affected by the spread of salt cedar (*Tamarisk ramosissima*). Salt cedar consumes an unusually high amount of water, which results in reduced wetland areas for vegetation preferred by the rail.

Another threat to the Yuma clapper rail is environmental contamination due to selenium. High selenium levels have been documented in crayfish, a primary prey of clapper rails, and some adult birds and eggs. Other threats to the Yuma clapper rail include mosquito abatement activities, agricultural activities, development, and the displacement of native habitats by exotic vegetation (CDFG 1991). The population of Yuma clapper rails at the Cienega de Santa Clara is threatened by the loss of the source of water that maintains the wetland habitat.

On March 11, 1967, the Service determined the Yuma clapper rail to be an endangered species (32 FR 4001, USFWS 1967). The State of California added the bird to its list of rare wildlife in May of 1971 and later listed it as threatened on February 22, 1978 (USFWS 1983). The Yuma Clapper Rail Recovery Plan, approved in 1983, provides background information on the species and identifies new or ongoing tasks necessary to achieve recovery of this species. This includes the long-term preservation of habitat in breeding and wintering areas of the United States and Mexico, and maintenance of suitable flows throughout the lower Colorado River. Many of the currently occupied breeding sites in the United States are on State and Federal lands that are protected and managed for wildlife. However, adequate water supplies are needed to assure the long-term availability of this habitat. Wintering areas and needs are not well known and require further study before habitat preservation needs can be determined. Many of the Mexican breeding sites are located in the Rio Colorado Delta area and require adequate flows in the lower Colorado River for long-term use by Yuma clapper rails.

California Black Rail

The black rail is the smallest of the North American rails. The adults are pale to blackish gray with white streaking on the undertail covers and flanks and a short, black bill. The nape and upper back are chestnut in color. The California subspecies is smaller and brighter than the Eastern black rail (*L. j. jamaicensis*; Eddleman *et al.* 1994). The California black rail is a secretive rail. Unlike other rails, the black rail is most vocal in the middle of the night.

The California black rail's diet consists mostly of insects, but also includes some crustaceans, and seeds of aquatic vegetation. Flores and Eddleman (1991) studied black rail diets and food availability at Mittry Lake and found that black rails consume a wide variety of invertebrates throughout the year, including beetles, earwigs, ants, grasshoppers, and snails. When invertebrate availability drops during the winter months, a larger portion of cattail and bulrush seeds is consumed. Lower resource availability in winter causes black rails to experience a significant weight loss, indicating they are more vulnerable to stress during this time. The California black rail forages by ground gleaning (Scott 1987; Ehrlich *et al.* 1988).

The California black rail inhabits fresh, brackish, and salt water marshes, occasionally wet savannah, and rarely dry grassland. Preferred habitat of the California black rail is characterized by minimal water fluctuations that provide moist surfaces or very shallow water, gently sloping shorelines, and dense stands of marsh vegetation (Repking and Ohmart 1977). Studies conducted along the lower Colorado River suggest that habitat structure and water depths are more important factors than plant composition in determining black rail use of wetland habitats. Unsuitable water and structural conditions appear to restrict the California black rail to only a fraction of the emergent vegetation available within an entire wetland (Flores and Eddleman 1991). In general, Flores and Eddleman (1991) found that black rails used marsh habitats with high stem densities and overhead coverage that were drier and closer to upland vegetation than randomly selected sites. Marsh edges with water less than 1 inch deep dominated by California bulrush and three-square bulrush are used most frequently. Areas dominated by cattail are also used regularly, but only in a small proportion to their availability and generally within 165 feet of upland vegetation where water depth is 1.2 inches. Telemetry studies at Mittry Lake found black rails to be sedentary, with home

ranges averaging 1.2 acres or less (Flores and Eddleman 1991). The erratic movements recorded for some juvenile and unmated birds during this research were consistent with the "wandering" behavior attributed to this subspecies and supports the idea that black rails may be capable of quickly occupying newly created habitats (Flores and Eddleman 1991).

Nesting biology of the California black rail is poorly understood. Double clutching and re-nesting may be fairly common in this subspecies. Both sexes assist in incubation and brood rearing, suggesting the species is monogamous, but the duration of its pair bond and variations in its mating system are still unstudied (Eddleman *et al.* 1994). These behaviors, combined with a relatively large clutch size, long breeding season, apparently low predation rates, and aggressive nest defense, suggest that the black rail has a high reproductive potential that is likely limited by the availability of shallow water environments (Eddleman *et al.* 1994; Flores and Eddleman 1991).

The California black rail occurs in the lower Colorado River area from the Imperial Dam, south to the Mexican border, with smaller, isolated populations scattered along the California coast from San Luis Obispo to San Diego Counties. It also occurs in the San Bernardino/Riverside area and at the Salton Sea (CDFG 1991). Along the lower Colorado River, the California black rail is a permanent resident in the vicinity of Imperial Dam and Bill Williams Delta (Snider 1969, Repking and Ohmart 1977). Black rails are also thought to breed in Cienega de Santa Clara, one of the only three breeding localities for this species in Mexico and one of the few for the subspecies anywhere (Piest and Campoy 1998).

In the proposed project area, appropriate habitats are found primarily in the managed wetlands on the state and federal wildlife refuges, in wetland areas adjacent to the Salton Sea, and in marsh habitats supported by seepage from the All American Canal and adjacent to the East Highline Canal, Finney Lake, and Salt Creek (Garrett and Dunn 1981). Black rails may use agricultural drains in the valley, although they have not been found to make extensive use of agricultural drains in previous surveys. Vegetation along agricultural drains mainly consists of common reed and tamarisk, species that are not generally used by black rails. Areas of cattails and bulrushes do exist along the drains. However, these areas are small and narrow and often interspersed with other vegetation, such as common reed. The habitat value of marsh vegetation supported by agricultural drains is probably limited and may only support foraging by black rails. The value of the drains to California black rails is also likely to be limited by their frequent water fluctuations, varying depths, and steep side slopes.

The North American population of black rails has very small and discontinuous ranges restricted largely to the United States. California black rail populations declined substantially between the 1920s and 1970s due to the loss and degradation of coastal salt marsh and inland freshwater marsh habitats (Eddleman *et al.* 1994, CDFG 1991). Along the lower Colorado River, black rail populations declined an estimated 30 percent between 1973 and 1989, with the majority of birds shifting from north of Imperial Dam to Mittry Lake during the same period (Eddleman *et al.* 1994). The effect of selenium in the lower Colorado River on black rails remains unknown, but toxic levels of this contaminant may also threaten black rail populations in the action area (AGFD 1996, Eddleman *et al.* 1994, Flores and Eddleman 1991). The lower Colorado River population and the small population in the Salton Sea area represent the only stable populations of this subspecies

(Eddleman *et al.* 1994, Rosenberg *et al.* 1991). The California black rail was listed as threatened by the State of California in 1971 (USFWS 1994, 1996).

California Brown Pelican

Brown pelicans (*Pelicanus occidentalis*) are recognized by their large size, impressive wingspan (up to 2 meters), short legs, distinctive long, hooked bill, and flexible lower mandible from which the highly expandable gular pouch is suspended. Six subspecies of brown pelicans have been described where the geographic variation in size is the primary distinguishing feature (Wetmore 1945). Unlike other brown pelican subspecies, the California brown pelican typically has a bright red gular pouch (the basal portion) that contrasts with its dark neck and is most visible during the courtship and egg-laying period (USFWS 1983).

The California brown pelican is found in marine habitats which range from the open ocean to inshore waters, estuaries, bays, and harbors. Pelicans commonly use undisturbed beaches, breakwaters, and jetties near coastal bays as roosting areas and forage nearby. They breed on specific offshore islands of southern California and northwestern Baja California, Mexico. Nesting colonies can be found on the Channel Islands, the Coronado Islands, and on the islands in the Gulf of California (Garrett and Dunn 1981). Brown pelicans are colonial nesters, and breeding is typically initiated in late December or early January. The nest is a small mound of sticks or debris on rocky, or low, brushy slopes of undisturbed islands (Cogswell 1977), usually on the ground and less often on bushes (Palmer 1962). After breeding, they begin migrating as early as mid-May. Individuals leave colonies in the Channel Islands and in Mexico and disperse along the entire California coast. During the nesting season, they generally stay within 20 kilometers of nesting islands (Briggs *et al.* 1981). Brown pelicans lay eggs from March to April, but records have indicated egg laying even as late as June (Palmer 1962). Clutch size is usually 3 eggs, sometimes 2 with a single brood each year. Incubation lasts about 4 weeks. Young are altricial and cared for by both parents, but they fledge at about 9 weeks. Brown pelicans first breed at about 3-5 years of age.

Brown pelicans are diurnal and active throughout the year. In California brown pelicans feed primarily on northern anchovy, Pacific sardine, and Pacific mackerel (Thelander and Crabtree 1994). Brown pelicans generally forage in early morning or late afternoon, or when the tide is rising. They feed almost entirely on fish, caught by diving from 6-12 meters in the air, and occasionally from up to 12 meters. They may completely or partially submerge, and water may be shallow or deep. Occasionally brown pelicans will feed on crustaceans, carrion, and young of its own species (Palmer 1962). They usually rest on water or inaccessible rocks (either offshore or on mainland), but will also use mudflats, sandy beaches, wharfs, and jetties. They do not roost overnight on water, rather they concentrate at a few traditional roosts on the mainland or islands (Briggs *et al.* 1981). They cannot remain on the water for more than one hour without becoming water-logged, and they require undisturbed roosts where they can dry and maintain their plumage during the day and at night (Schreiber and Schreiber 1982). Schreiber and Schreiber (1982) identified the need for this species to have year round access to undisturbed loafing and roosting sites in proximity to foraging areas. This need was reinforced in the Recovery Plan for this species (USFWS 1983) that identified roosting and loafing areas as essential habitat.

The current breeding distribution of the brown pelican ranges from the Channel Islands off southern California southward (including the Baja California coast and the Gulf of California) to Isla Isabella, and Islas Tres Marias off Nayarit, Mexico, and Isla Ixtapa off Guerrero, Mexico. About 45,000 pairs nest on Mexico's west coast (Ehrlich *et al.* 1992) including approximately 35,000 pairs in the Gulf of California (David Pereksta, USFWS, pers. comm. 2002), and this population is considered stable at this time (Dan Anderson, University of California at Davis, pers. comm.). Between breeding seasons, brown pelicans may range as far north as Vancouver Island, British Columbia and south to Central America. As plunge divers, they require relatively clear water to visually locate their prey from on the wing. The largest numbers of brown pelicans (most of which derive from Mexican colonies) appear in California during late summer and fall. Year-to-year post-breeding dispersal patterns of brown pelicans are, however, largely determined by the oceanographic conditions which influence anchovy availability.

The brown pelican is a common post-breeding visitor to the Salton Sea, with numbers steadily increasing over the past decades from the first records beginning in the early 1950s (Patten *et al.*, in press). This species does not occur elsewhere inland in such numbers or with such regularity. In fact, the brown pelican colony closest to the Salton Sea is about 220 miles away, on San Luis Island in the Gulf of California (IID 1994). The Salton Sea currently supports a year-round population of California brown pelicans, where during the past few years single-day counts have sometimes exceeded 3,000 individuals (Patten *et al.*, in press). Records indicate that a brown pelican nested successfully in 1996 at the Salton Sea (the first nesting of a California brown pelican on an inland lake) and exhibited nesting activity in 1997 and 1998 (Charlie Pelizza, Sonny Bono Salton Sea NWR, pers. comm.). Because brown pelicans are associated with large open water bodies, habitat for brown pelicans in the proposed project area principally occurs at the Salton Sea where abundant fish populations provide foraging opportunities for brown pelicans. This species occurs almost anywhere along the shoreline of the Salton Sea, most often around rock outcrops and embankments. The brown pelican has nested on small islands of volcanic rock with a sandy base and at the Alamo River mouth on beds of matted reeds. From June through September they can be found at least occasionally on virtually every body of water in the Imperial Valley (Patten *et al.*, in press). In addition to the Salton Sea, brown pelicans are known to forage at Finney Lake in the Imperial Wildlife Area (U.S. Army Corps of Engineers 1996).

Juvenile brown pelicans tend to disperse the farthest from their natal site than any other age class and prefer estuaries over open coastal areas. As birds reach sexual maturity (3-5 years), it has been suggested that the birds return back to their natal site and rarely settle at another colony. Thus, birds that now use the Salton Sea are more likely to stay in the Gulf of California once the Salton Sea is no longer a viable source of fish. However, band returns indicate that brown pelicans are capable of moving from the southern California coast to the Salton Sea. Adults may also use specific wintering areas rather than disperse like the juveniles.

Brown pelicans declined greatly in the mid-20th century because of human persecution and disturbance of nesting colonies. This species has also experienced widespread pollutant-related reproductive failures during the late 1960's and early 1970's due to the use of DDT and the resultant egg-shell thinning. Because of these declines, the brown pelican was classified as endangered by the Service on October 13, 1970 (35 FR [2] 16047, USFWS 1970). As of the

1990's, the ecological effects of DDT contamination still had not been entirely eliminated within the Southern California Bight, and incidences of eggshell thinning do occur but at a greatly reduced frequency as compared to the early 1970's. Acute contamination of the Southern California Bight water mass by DDT compounds has thus been replaced by low-level, chronic contamination. Complete recovery of the brown pelican reproductive rates from past pesticide contaminations may still be years away as DDT and its known breakdown product DDE are quite persistent in the environment. Although its use is banned in the United States (Bennett 1996), it is still present in the Imperial Valley and Salton Sea which can affect the brown pelican's reproductive success as a result of bioaccumulation of DDE from foraging at the Salton Sea during the non-breeding season (USFWS 1996).

Brown pelicans also have been impacted by disturbance of their nesting colonies by fishing and recreational activities, particularly in the Southern California Bight (David Pereksta, USFWS, pers. comm.). Better regulation of human access (particularly at the Los Coronados Islands colony) and exotic predators would likely increase the nesting success of brown pelicans in these colonies by reducing the rate of nest abandonment.

Brown pelicans in the Southern California Bight rely largely on schooling fish species such as anchovy and sardine (USFWS 1983). This species would benefit from tighter controls over commercial fishing of these species, particularly in the vicinity of the breeding colonies. Impacts of commercial fishing can be magnified in years with the "El Niño Southern Oscillation" when warm currents drive fish schools north of the breeding colonies. Prey availability may be limiting the productivity of the Southern California Bight colonies; the reproductive rates have been relatively constant and below recovery targets for several years (Frank Gress, University of California at Davis, pers. comm.).

ENVIRONMENTAL BASELINE

Desert Pupfish

Desert pupfish were abundant along the shore of the Salton Sea through the 1950s (Barlow 1961). During the 1960s, the numbers declined, and by 1978 they were noted as scarce and sporadic (Black 1980). Declines are thought to have resulted from the introduction and establishment of several exotic tropical species into the Salton Sea (Bolster 1990; Black 1980). These introduced species prey on or compete with desert pupfish for food and space. Other factors responsible for declines in desert pupfish populations include habitat modification due to water diversions and groundwater pumping for agriculture (Pister 1974; Black 1980). There is also concern that introduced saltceder (tamarisk) near pupfish habitat may cause a lack of water at critical times due to evapotranspiration (Marsh and Sada 1993). Aerial pesticide application is a common practice around the Salton Sea that may also affect pupfish populations (Marsh and Sada 1993).

Desert pupfish occur in Salt Creek and San Felipe Creek and its tributaries. This species also occurs at and within the mouths of agricultural drains that discharge directly to the Salton Sea and shoreline pools along the edge of the Salton Sea. Desert pupfish have been located in agricultural drains within the proposed project area on the northwest, southwest, south, and southeast sides of

the Salton Sea. These drains currently number 52 total with 29 in IID's jurisdiction and 23 in CVWD's area. Maintaining these populations in the long-term has been determined to be necessary for the recovery of the species (USFWS 1993). Based on our current understanding, this includes maintaining the drain populations and providing for pupfish movement between individual drains. A status report for the desert pupfish is in preparation by the CDFG. They report that populations of desert pupfish in San Felipe and its tributaries are stable. Tilapia were present in San Felipe Creek in 1997, but they are now extirpated. Some other non-native fish may be present, but they are not considered a threat to pupfish populations in that location (Bureau of Land Management 2001).

Cooperative monitoring surveys have been conducted in 1993, 1994, and in 1996 for desert pupfish in non-refugium habitats in the Salton Sea, specifically in the mouths of irrigation drains and in two shoreline pools. The total number of pupfish trapped in 1993 was 504. In 1994 the total number was 538, however 259 of the pupfish were found dead in the traps that year (Michael Remington, IID, pers. comm.). Pupfish were trapped in over half of the 29 possible locations in the irrigation drains and shoreline pools tested in the 1993 and 1994 surveys. Results from the 1996 surveys indicated that the pupfish were only caught in the Trifolium Storm drain (16 pupfish), Trifolium 20-A (13 pupfish), San Felipe Wash (31 pupfish), Trifolium 19 (1 pupfish), Trifolium 12 (1 pupfish), Trifolium 23 (1 pupfish), Trifolium 1 (1 pupfish), and the "R" drain (1 pupfish; Sharon Keeney, CDFG, pers. comm.; and Michael Remington, IID, pers. comm.). The total number trapped in the 1996 survey was 65 pupfish. A study conducted by Sutton (2000) in 1999 that focused on the movement of pupfish between drains and creeks and their associated shoreline pools. This was not a comprehensive survey, but the total number of individuals captured was 3,239. The vast majority of these were found in two locations: the Trifolium 20A drain and the shoreline pool associated with the Trifolium 23 drain. More recent and limited surveys by the U.S. Geological Survey (USGS) found 217 desert pupfish in three locations around the north end of the Salton Sea (Barbara Martin, USGS, pers. comm.), but these surveys were not designed to estimate the desert pupfish population at the Salton Sea.

Yuma Clapper Rail

In California this species nests along the lower Colorado River, in wetlands along the Coachella Canal, the Imperial Valley, the upper end of the Salton Sea at the Whitewater River delta, and Salt Creek (NatureServe 2001). Hydroelectric dams along the Colorado River have apparently increased the amount of marsh habitat, and population numbers of the Yuma clapper rail may have increased expanding the range northward in response to the increase in available habitat (Bureau of Land Management 2001). Also, habitat was expanded through the creation of the Salton Sea in the early 1900s. The population along the lower Colorado River was estimated in the 1980s at 550-750 in the U.S. and 200 in Mexico (NatureServe 2001). The action area essentially covers the U.S. range of the species.

In the proposed project area, the principal concentrations of Yuma clapper rails are at the south end of the Salton Sea near the New and Alamo River mouths, at the Sonny Bono Salton Sea NWR, at the Wister Unit of the Imperial Wildlife Management Area, Imperial NWR, Cibola NWR, Mitty Lake, West Pond, Bill Williams Delta, Topock Gorge, Topock Marsh and at Finney Lake in the

Imperial Wildlife Management Area. As many of these areas occur on state reserve or NWR lands, these state and federal properties will continue to have a major role in the long-term conservation of this species. Continued access to adequate water to maintain these habitats will be a key factor in the long-term management of the Yuma clapper rail.

Between 1995 and 2002, an average of 306 rails have been counted around the Salton Sea, and an average of 276 were counted in the same period along the lower Colorado River corridor (USFWS, unpublished data). The Imperial Valley population represents an estimated 42 percent of the entire U.S. population of this species (Point Reyes Bird Observatory 1999; USFWS 1999; Lesley Fitzpatrick, USFWS, pers. comm.). Despite representing a sizeable proportion of the subspecies' population, overall numbers at the Salton Sea are modest (Patten *et al.*, in press). For example, only 96 individuals were censused around the south end of the Salton Sea during the summer of 1993 (AB 47:1149 AB) and only 279 were located during extensive surveys in 1999 (Shuford *et al.* 2000). Principal regional sites are the Wister Unit of the Imperial Wildlife Area, Unit 1 of the Sonny Bono Salton Sea NWR, and adjacent marshes around the New River. Yuma clapper rails have been found outside these refuge areas also. Between 1995 and 2002, a range of 3 to 42 (average of 20) clapper rails were counted outside the refuges (USFWS unpublished data). This includes the Trifolium 1 and Holtville Main irrigation drains (Steve Johnson, Sonny Bono Salton Sea NWR, pers comm.; Hurlbert *et al.* 1997). A maximum count in the Holtville Main drain at one time was 5 pairs and 2 individuals (USFWS unpublished data). This particular drain is unusual for its length (17.8 miles) and extent of vegetation (Hurlbert *et al.*, 1997), and it may be more likely than most drains in the system to provide habitat for Yuma clapper rails given those characteristics. In 1994, 2 pairs and 2 single rails were heard calling in the Bruchard drain during breeding season surveys (Ken Sturm, Sonny Bono Salton Sea NWR, pers. comm.).

California Black Rail

Black rails occur along the lower Colorado River, with approximately 100 to 200 individuals estimated to occur from Imperial National Wildlife Refuge south to Mitty Lake (Rosenberg *et al.* 1991). In more recent surveys a total of 100 individuals were counted at 20 sites along the lower Colorado River (Courtney Conway, USGS, unpublished data). Of this total 62 black rails were found in Arizona, and 38 were in California.

This species was presumed to be rare and infrequent in the Salton Sea area until the late 1970s, when it was discovered that small numbers were present in the Imperial Valley and elsewhere around the Salton Sea. Other regional records from the late 1970s through the 1980s are from the vicinity of the New River mouth and Fig Lagoon. The species persisted at Finney Lake through the 1980s but disappeared when the CDFG drained the lakes for renovation, with the last bird recorded in April 1989 (Evens *et al.* 1991). A study by Jurek (1975) and other investigators in 1974 and 1975 identified eight marsh areas with black rails between the Coachella and East Highline Canals south of Niland. Six individual records near Niland from January and February (Patten *et al.*, in press) suggest that black rails are resident at the Salton Sink, but it may be only a sporadic winter visitor to the Salton Sink area (Garrett and Dunn 1981; Evens *et al.* 1991). The Coachella Canal south of Niland was concrete-lined in 1981, and all black rail habitat supported by canal seepage was desiccated (Evens *et al.* 1991). More recently, black rails were censused along the All

American Canal during April and May of 1988 in conjunction with Yuma clapper rail surveys. A minimum of three black rails was recorded for the area. In the a systematic survey for the species at the Salton Sea and surrounding areas in 1989, 15 birds were recorded in the Salton Sea area (Laymon *et al.* 1990). In 1999, the Point Reyes Bird Observatory failed to find the species during focused surveys for it around the south end of the Sea (B. Mulrooney in Patten *et al.*, in press). In 2000 Courtney Conway (USGS, unpublished data) found no California black rails in surveys around the Salton Sea area. These surveys also covered the seepage areas along the All American and Coachella Canals, and black rails were located in these surveys. A total of 21 were reported along the All American Canal and six along the Coachella Canal. Another five black rails were found along the New River. The reproductive status of these birds is uncertain, although some locations have had numerous calling birds over a period of several weeks in the spring, suggesting a breeding population (Reclamation and Salton Sea Authority 2000).

California Brown Pelican

Food availability, disturbance, and oceanic pollution currently appear to be the major limiting factors to populations of California brown pelicans (USFWS 1983). Potential threats related to these limiting factors include commercial fisheries, oil development, recreational fisheries, sonic booms and increased tourism (USFWS 1983). Most North American populations of this species were extirpated by 1970. Since the banning of DDT and other organochlorine use in the early 1970s, brown pelicans have made a strong recovery and are now fairly common and perhaps still increasing on the southeast and west coasts (Kaufmann 1996). The endangered Southern California Bight population of the brown pelican grew to 7,200 breeding pairs by 1987, but has experienced considerable population fluctuations in recent years and has not been considered sufficiently stable for delisting (CDFG 1992). In 1992 there were an estimated 6,000 pairs in Southern California. Future restoration efforts (currently being planned) to reduce the existing DDT contamination in the Southern California Bight would be beneficial to this breeding population.

The Salton Sea is part of the Rio Colorado Delta, and the brown pelicans at the Sea are most likely affiliated with the breeding colonies in the Gulf of California. Brown pelicans probably had little historical use of the Salton Sea (Anderson 1993), although the Salton Sea may have recently taken on greater importance for these birds as a result of the degradation of habitat in the Delta. Some visiting postbreeding pelicans were documented at the Salton Sea in the late 1970s, but overwintering was not confirmed until 1987. Use of the Salton Sea by brown pelicans subsequently increased. Now use is largely seasonal, typically numbering 1,000 to 2,000 birds, with peak numbers ranging from 4,000 to 5,000 birds in the late summer/early fall (Charles Pelizza, Sonny Bono Salton Sea NWR, pers. comm.). The age structure also varies seasonally with brown pelicans at the Salton Sea where adults dominate in the spring and juveniles arrive in the summer and are followed by adults in the late summer/early fall. Based on behavioral observations, the brown pelicans using the Salton Sea may come from a single breeding colony in the northern Gulf of California (Dan Anderson, University of California at Davis, pers. comm.). If these birds have become dependent on the Salton Sea to supplement their non-breeding forage requirements, the impacts of the loss of access to the Sea may have a greater impact than if the effects were spread throughout the Gulf of California population as a whole.

Brown pelicans at the Salton Sea roost predominantly at Obsidian Butte, Mullet Island, and the sand bars associated with the three river mouths (Charles Pelizza, Sonny Bono Salton Sea NWR, pers. comm.). Other areas are used in low numbers (e.g., the break waters along the south end of the Salton Sea), but these areas are subject to various human activities (e.g., vehicle use and fishing) and thus are not consistently available. The high use areas are currently surrounded completely or largely by shallow water, and they may be lost as functional roosts due to greater accessibility to terrestrial species as the Salton Sea recedes.

The brown pelican was first found to nest successfully at the Salton Sea in 1996 with 3 nests resulting in nine fledglings. Although pairs attempted to nest in 1997, five nests were unsuccessful due to flooding. An undocumented number of nesting attempts were observed in 1998, but no successful nests were established. No nesting activity has been recorded since 1998 (Charles Pelizza, Sonny Bono Salton Sea NWR, pers. comm.).

Brown pelicans have experienced losses at the Salton Sea as a result of annual outbreaks of avian botulism since 1996 (USFWS unpublished data). The greatest losses occurred in 1996 with a total of 2,034 birds affected by the botulism event. The losses have been less since that 1996 event, with numbers of brown pelicans affected ranging from 274 to 1,311. Given the increased effort to identify and rehabilitate sick birds, the number of mortalities relative to the total number of pelicans affected has decreased overall since the 1996 event. The cause of these annual outbreaks has not been determined conclusively, but the Salton Sea's highly eutrophic condition may be a contributing factor.

EFFECTS OF THE ACTION

Desert Pupfish

The desert pupfish is known to use irrigation drains that flow directly into the Salton Sea and the Salton Sea itself, and this species will be affected by water conservation-related changes in those two areas. These impacts are expected to be associated with potential reductions in habitat, increases in selenium concentrations in the drains, and physical/chemical barriers to movement in the Salton Sea that could result in isolating sub-populations within individual drains.

The water conservation activities proposed by IID will result in the reduction of flows in the drains that flow directly to the Salton Sea by 7-39 percent, depending on the proportion of fallowing to efficiency conservation conducted for the water transfer. Narrower and/or shallower flows may result in a physical reduction of habitat for the desert pupfish despite Reclamation's commitment to maintain the current linear extent of the desert pupfish habitat and the expectation that drains will be extended as the Salton Sea elevation goes down. Because the program is based on voluntary participation by farmers that will vary over time, specific reductions in the flows of individual drains cannot be determined. While the quantity of habitat may be reduced, the quality may be increased if the flow reductions result in fewer exotic species using the drains. *Tilapia zillii* and other exotic fish species are known to use the drains in addition to the desert pupfish. *Tilapia zillii*, in particular, favors deeper water for spawning, but desert pupfish are expected to use shallower depths than most other species (Marsh and Sada 1993). Thus, decreases in depth of flow may

offset the losses of physical habitat that occur by suppressing competition and/or predation by exotic species. The effect in this case is expected to be neutral or positive because decreases in depth are not expected to enhance and may reduce the reproduction of exotic species. If width decreases without adequate changes in depth, the desert pupfish could be confined to smaller physical space without a reduction in competitors and/or predators. This could result in a negative effect associated with the reduction in flows if not offset by the increased length of the drains as the Salton Sea recedes. Water conservation is expected to reduce the loading of suspended sediments and sediment-associated contaminants (e.g., phosphorus and organochlorine pesticides) into the aquatic environment, which could benefit desert pupfish. The net effect of these changes cannot be quantified at this time, but take in the form of harm may occur from reduced flows that result in reduced habitat and/or increased competition and predation in those drains in the IID system that flow directly to the Salton Sea.

As a result of the use of on-farm and systems water conservation, the Imperial Irrigation Decision Support System (IIDSS) model output indicates that selenium concentrations will increase over time to higher concentrations than are anticipated under the baseline. The concentrations under the proposed project are anticipated to be 2.24 to 11.7 $\mu\text{g/L}$ in the drains that flow directly to the Salton Sea whereas those concentrations were predicted by the model to be 2.24 to 8.48 $\mu\text{g/L}$ under the baseline. The mean concentration under the proposed project (5.88 $\mu\text{g/L}$) exceeds the baseline mean concentration (4.70 $\mu\text{g/L}$) by 1.18 $\mu\text{g/L}$. However, a study of surface drain water conducted in 1994 found concentrations of selenium in the range of 2 to 52 $\mu\text{g/L}$, with a mean concentration of 6 $\mu\text{g/L}$ (Setmire 1999). This suggests that the predictions provided by the model are somewhat low and should be used with caution. The BA provides long-term average concentrations for selenium in the surface drains of the Alamo and New River Basins. These concentrations are representative of the average concentrations in drain water in each of those basins. These concentrations are 7.9 and 7.4 $\mu\text{g/L}$ selenium, respectively, and they also suggest that the concentrations provided by the model for the direct-to-Sea drains may underestimate the future concentrations.

As part of a study recently funded by the Service, samples were collected from various drains and shoreline pools potentially occupied by desert pupfish. In this effort water, sediment, plant material, and surrogate fish samples were collected. Despite the fact that none of the drain water samples had detectable concentrations of selenium (detection limit of 5.6 $\mu\text{g/L}$), the other sample matrices had detectable concentrations which in many cases exceeded levels of concern. The sediment samples for the sampled drains had concentrations that ranged from <0.519 to 5.86 mg/kg dry weight (DW). The vegetation samples had concentrations that ranged from <0.992 to 3.97 $\mu\text{g/g DW}$. The whole body surrogate fish samples had concentrations that ranged from 3.38 to 14.7 $\mu\text{g/g DW}$. All 37 surrogate fish samples showed concentrations that exceeded 3 $\mu\text{g/g DW}$, and 35 of the 37 exceeded 4 $\mu\text{g/g DW}$.

Hazards of Selenium

Selenium Sources

Selenium, a semi-metallic trace element with biochemical properties very similar to sulfur, is widely distributed in the earth's crust, usually at trace concentrations (<1 µg/g, ppm; e.g., Wilber 1980; Eisler 1985). Some geologic formations, however, are particularly seleniferous (e.g., Presser and Ohlendorf 1987, Presser 1994, Presser *et al.* 1994, Piper and Medrano 1994, Seiler 1997, Presser and Piper 1998), and when disturbed by anthropogenic activity provide pathways for accelerated mobilization of selenium into aquatic ecosystems. Abnormally high mass-loading of selenium into aquatic environments is most typically associated with the use of fossil fuels, with intensive irrigation and over-grazing of arid lands, and with mining of sulfide ores (Skorupa 1998). Intensive confined livestock production facilities and municipal wastewater treatment plants may also contribute to accelerated mass-loading of selenium into surface water bodies. Agricultural irrigation over large areas of the western United States causes accelerated leaching of selenium from soils into groundwater. Natural and anthropogenic discharge of subsurface agricultural drainage water to surface waters is a major pathway for the mass-loading of selenium into aquatic ecosystems (Presser *et al.* 1994, Presser 1994, Seiler 1997, Presser and Piper 1998, Skorupa 1998).

Toxicity

For vertebrates, selenium is an essential nutrient (Wilber 1980). Inadequate dietary uptake (food and water) of selenium results in selenium deficiency syndromes such as reproductive impairment, poor body condition, and immune system dysfunction (Oldfield 1990; CAST 1994). However, excessive dietary uptake of selenium results in toxicity syndromes that are similar to the deficiency syndromes (Koller and Exon 1986). Thus, selenium is a "hormetic" chemical, i.e., a chemical for which levels of safe dietary uptake are bounded on both sides by adverse-effects thresholds. Most essential nutrients are hormetic; what distinguishes selenium from other nutrients is the very narrow range between the deficiency threshold and the toxicity threshold (Wilber 1980, Sorensen 1991). Nutritionally adequate dietary uptake (from feed) is generally reported as 0.1 to 0.3 µg/g (ppm) on a dry feed basis, whereas, the toxicity threshold for sensitive vertebrate animals is generally reported as 2 µg/g (ppm). That dietary toxicity threshold is only one order-of-magnitude above nutritionally adequate exposure levels (see review in Skorupa *et al.* 1996, USDI-BOR/FWS/GS/BIA 1998).

Hormetic margin-of-safety data suggest that environmental regulatory standards for selenium should generally be placed no higher than one order of magnitude above normal background levels (unless there are species-specific and site-specific data to justify a variance from the general rule). For freshwater ecosystems that are negligibly influenced by agricultural or industrial mobilization of selenium, normal background concentrations of selenium have been estimated as 0.25 µg/L (ppb; Wilber 1980), 0.1-0.3 µg/L (ppb; Lemly 1985), 0.2 µg/L (ppb; Lillebo *et al.* 1988), and 0.1-0.4 µg/L (ppb; average <0.2, Maier and Knight 1994).

Direct Waterborne Contact Toxicity

Selenium occurs in natural waters primarily in two oxidation states, selenate (+6) and selenite (+4). Waters associated with various fossil-fuel extraction, refining, and waste disposal pathways contain selenium predominantly in the selenite (+4) oxidation state. Waters associated with irrigated

agriculture in the western United States contain selenium predominantly in the selenate (+6) oxidation state. Based on traditional bioassay measures of toxicity (24- to 96-hour contact exposure to contaminated water *without* concomitant dietary exposure), selenite is more toxic than selenate to most aquatic taxa (e.g., see review in Moore *et al.* 1990).

Most aquatic organisms, however, are relatively insensitive to waterborne contact exposure to either dissolved selenate or dissolved selenite, as adverse-effects generally occur at concentrations above 1,000 $\mu\text{g/L}$ (ppb). By contrast, waterborne contact toxicity for selenium in the form of dissolved seleno-amino-acids (such as selenomethionine and selenocysteine) has been reported at concentrations as low as 3-4 $\mu\text{g/L}$ (ppb) for striped bass (*Morone saxatilis*; Moore *et al.* 1990). It would be expected, however, that at a long-term concentration of 5 $\mu\text{g/L}$ (ppb) *total selenium* the concentration of dissolved seleno-amino-acids would be substantively below 3-4 $\mu\text{g/L}$ (ppb) because seleno-amino-acids usually make up much less than 60-80 percent of *total dissolved selenium* in natural waters. For example, it was estimated that organoselenium made up only 4.5 percent of the total dissolved selenium in highly contaminated drainage water from the San Joaquin Valley (Besser *et al.* 1989). Under most circumstances, a long-term concentration of 5 $\mu\text{g/L}$ should be protective of aquatic life *with regard to direct contact toxicity*. Selenium, however, is bioaccumulative and therefore the direct contact exposure is only considered a minor exposure pathway for aquatic organisms (e.g., see review by Lemly 1996a).

Bioaccumulative Dietary Toxicity

Although typical concentrations of different chemical forms of selenium would be unlikely to cause direct contact toxicity at a long-term concentration of 5 $\mu\text{g/L}$ (ppb), as little as 0.1 $\mu\text{g/L}$ of dissolved selenomethionine has been found sufficient, via bioaccumulation, to cause an average concentration of 14.9 $\mu\text{g/g}$ (ppm, dry weight) selenium in zooplankton (Besser *et al.* 1993), a concentration that would cause dietary toxicity to most species of fish (Lemly 1996a). Based on Besser *et al.* (1993) bioaccumulation factors (BAFs) for low concentrations of selenomethionine, as little as 6 ng/L of dissolved selenomethionine would be sufficient to cause food chain bioaccumulation of selenium to concentrations exceeding toxic thresholds for dietary exposure of fish and wildlife. Thus, at a chronic concentration of 5 $\mu\text{g/L}$ (ppb) as *total selenium*, if more than 0.1 percent of the total dissolved selenium were in the form of selenomethionine, food chain accumulation of selenium to levels sufficient to cause dietary toxicity in sensitive species of fish and birds would occur. Unfortunately, relative concentrations of selenoamino-acids have not been determined in the field in California for waters where total selenium is found in the critical 1-5 $\mu\text{g/L}$ range. Further research is required to characterize typical proportions of seleno-amino-acids in waters containing 1-5 $\mu\text{g/L}$ (ppb) *total selenium*.

Based on waters containing 1-5 $\mu\text{g/L}$ (ppb) *total selenium*, composite bioaccumulation factors (defined as: the total bioaccumulation of selenium from exposure to a composite mixture of different selenium species measured only as *total selenium*) for aquatic food chain items (algae, zooplankton, macro-invertebrates) are typically between 1,000 and 10,000 (on dry weight basis; Lillebo *et al.* 1988, Lemly 1996a). Therefore, based on risk from bioaccumulative dietary toxicity, a chronic concentration somewhere in the range of 0.2 to 2 $\mu\text{g/L}$ (ppb) would not be expected to have adverse effects. More specifically, based on an analysis of bioaccumulative dietary risk and a

literature database, Lillebo *et al.* (1988) concluded that a chronic criterion of 0.9 µg/L (ppb) for *total selenium* is required to protect fish from adverse toxic effects. Furthermore, Peterson and Nebeker (1992) applied a bioaccumulative risk analysis to semi-aquatic wildlife taxa and concluded that a chronic standard of 1 µg/L (ppb) for *total selenium* was warranted. Most recently, Skorupa (1998) has compiled a summary of field data that includes multiple examples of fish and wildlife toxicity in nature at waterborne selenium concentrations below 5 µg/L (ppb), supporting the criteria recommendations of Lillebo *et al.* (1988) and Peterson and Nebeker (1992). A recently concluded regional survey of irrigation related selenium mobilization in the western United States, conducted jointly by several agencies of the U.S. Department of the Interior over a ten-year period, found that at 5 µg/L total selenium in surface waters about 60% of associated sets of avian eggs exceeded the toxic threshold for selenium, i.e., that 5 µg/L Se was only about 40% protective against excessive bioaccumulation of selenium into the eggs of waterbirds (Seiler and Skorupa, In Press).

Interaction Effects Enhancing Selenium Toxicity

Toxic thresholds for fish and wildlife dietary exposure to selenium have been identified primarily by means of controlled feeding experiments with captive animals (e.g., see reviews by NRC 1980, 1984, 1989; Heinz 1996, Lemly 1996a, Skorupa *et al.* 1996, USDI-BOR/FWS/GS/BIA 1998). Such experiments are carefully designed to isolate the toxic effects of selenium as a *solitary stressor*. Consequently, the toxic thresholds identified by such studies are prone to overestimating the levels of selenium exposure that can be tolerated, without adverse effects, in an environment with *multiple stressors* as is typical of the real ecosystems (Cech *et al.* 1998). There are at least three well-known multiple-stressor scenarios for selenium that dictate a very conservative approach to determining adequately protective concentrations for aquatic life:

1. Winter Stress Syndrome - More than 60 years ago it was first discovered in experiments with poultry housed in outdoor pens that dietary toxicity thresholds were lower for experiments done in the winter than at other times of the year (Tully and Franke 1935). More recently this was confirmed for mallard ducks (*Anas platyrhynchos*) by Heinz and Fitzgerald (1993). Lemly (1993), studying fish, conducted the first experimental research taking into account the interactive effects of winter stress syndrome and confirmed that such effects are highly relevant even for waters containing <5 µg/L (ppb) selenium. Consequently, Lemly (1996b) presents a general case for winter stress syndrome as a critical component of hazard assessments. It can be further generalized that any metabolic stressor (cold weather, migration, smoltification, pathogen challenge, etc.) would interact similarly to lower the toxic thresholds for dietary exposure to selenium. Based on a comparison of results from Heinz and Fitzgerald (1993) and Albers *et al.* (1996), the dietary toxicity threshold in the presence of winter stress was only 0.5-times the threshold level for selenium as a solitary stressor.

2. Immune System Dysfunction - Also more than 60 years ago, it was first noted that chickens exposed to elevated levels of dietary selenium were differentially susceptible to pathogen challenges (Tully and Franke 1935). More recently this was confirmed for mallard ducks by Whiteley and Yuill (1989). Numerous other studies have confirmed the physiological and histopathological basis for selenium-induced immune system dysfunctions in wildlife (Fairbrother and Fowles 1990,

Schamber *et al.* 1995, Albers *et al.* 1996). Based on Whiteley and Yuill's (1989) results, *in ovo* exposure of mallard ducklings to as little as 3.9 $\mu\text{g/g}$ (ppm dry weight basis) selenium was sufficient to significantly increase mortality when ducklings were challenged with a pathogen. The lowest confirmed *in ovo* toxicity threshold for selenium as a solitary stressor is 10 $\mu\text{g/g}$ (ppm dry weight basis; Heinz 1996, reported as 3 $\mu\text{g/g}$ wet weight basis and about 70% moisture). In this case the multiple-stressor toxicity threshold is only 0.39-times the threshold level for selenium as a solitary stressor.

3. Chemical Synergism - Multiple stressors can also consist of other contaminants. For example, Heinz and Hoffman (1998) recently reported very strong synergistic effects between dietary organo-selenium and organo-mercury with regard to reproductive impairment of mallard ducks. The experiment of Heinz and Hoffman (1998) did not include selenium treatments near or below the threshold for diet-mediated reproductive toxicity and therefore no ratio of single-stressor versus multiple-stressor threshold levels is available. A field study involving 12 lakes in Sweden, however, found that in the presence of threshold levels of mercury contamination, the waterborne threshold for selenium toxicity was about 2.6 $\mu\text{g/L}$ (ppb; see review in Skorupa 1998, and review in USDI-BOR/FWS/GS/BIA 1998). Meili (1996) concluded that, "The results [of the Swedish Lakes studies] suggest that a selenium concentration of only 3 $\mu\text{g/L}$ can seriously damage fish populations."

Environmental Partitioning and Waterborne Toxicity Thresholds

Risk management via water concentration-based water quality criteria is an inherently flawed process for selenium (Pease *et al.* 1992, Taylor *et al.* 1992, 1993; Canton 1997). The process is flawed because the potential for toxic hazards to fish and wildlife is determined by the rate of mass-loading of selenium into an aquatic ecosystem and the corresponding environmental partitioning of mass-loads between the water column, sediments, and biota (food chain). However, a water column concentration of selenium can be an imperfect and uncertain measure of mass-loading and food chain bioaccumulation. For example, a low concentration of waterborne selenium can occur because mass-loading into the system is low (= low potential for hazard to fish and wildlife) or because there has been rapid biotic uptake and/or sediment deposition from elevated mass-loading (= high potential for hazard to fish and wildlife). Toxicity to fish and wildlife is ultimately determined by how much selenium is partitioned into the food chain. Several examples of potentially hazardous food chain bioaccumulation of selenium at waterborne selenium concentrations $< 2 \mu\text{g/L}$ are known from California (Maier and Knight 1991, Pease *et al.* 1992, Luoma and Linville 1997, San Francisco Estuary Institute [SFEI] 1997a, Setmire *et al.* 1990, 1993; Bennett 1997) and elsewhere (Birkner 1978, Lemly 1997, Hamilton 1998).

Fish

A tremendous amount of research regarding toxic effects of selenium on fish has been conducted since the late 1970's. Recently, this body of research was reviewed and summarized by Lemly (1996b). Lemly reports that salmonids are very sensitive to selenium contamination and exhibit toxic symptoms even when tissue concentrations are quite low. Survival of juvenile rainbow trout (*Oncorhynchus mykiss*) was reduced when whole-body concentrations of selenium exceeded 5

$\mu\text{g/g}$ (dry wt.). Smoltification and seawater migration among juvenile chinook salmon (*Oncorhynchus tshawytscha*) were impaired when whole-body tissue concentrations reached about $20 \mu\text{g/g}$. However, mortality among larvae, a more sensitive life stage, occurred when concentrations exceeded $5 \mu\text{g/g}$. Whole-body concentrations of selenium in juvenile striped bass collected from areas in California impacted by irrigation drainage ranged from 5 to $8 \mu\text{g/g}$.

Summarizing studies of warm-water fish Lemly reports that growth was inhibited at whole-body tissue concentrations of 5 to $8 \mu\text{g/g}$ selenium or greater among juvenile and adult fathead minnows (*Pimephales promelas*). Several species of centrarchids (sunfish) exhibited physiologically important changes in blood parameters, tissue structure in major organs (ovary, kidney, liver, heart, gills), and organ weight-body weight relations when skeletal muscle tissue contained 8 to $36 \mu\text{g/g}$ selenium. Whole-body concentrations of only 4 to $6 \mu\text{g/g}$ were associated with mortality when juvenile bluegill (*Lepomis macrochirus*) were fed selenomethionine-spiked commercial diets in the laboratory. When bluegill eggs contained 12 to $55 \mu\text{g/g}$ selenium, transfer of the selenium to developing embryos during yolk-sac absorption resulted in edema, morphological deformities, and death prior to the swim-up stage. In a laboratory study of "winter stress syndrome" juvenile bluegill exposed to a diet containing $5.1 \mu\text{g/g}$ selenium and water containing $4.8 \mu\text{g/L}$ (ppb) selenium exhibited hematological changes and gill-damage that reduced respiratory capacity while increasing respiratory demand and oxygen consumption. In combination with low water temperature (4 degrees Celsius), these effects caused reduced activity and feeding, depletion of 50 to 80 percent of body lipid, and significant mortality within 60 days. Winter stress syndrome resulted in the death of about one-third of exposed fish at whole body concentrations of 5 to $8 \mu\text{g/g}$ selenium.

Based on Lemly's review of more than 100 papers, he recommended the following toxic effects thresholds for the overall health and reproductive vigor of freshwater and anadromous fish exposed to elevated concentrations of selenium: $4 \mu\text{g/g}$ whole body; $8 \mu\text{g/g}$ skinless fillets; $12 \mu\text{g/g}$ liver; and $10 \mu\text{g/g}$ ovary and eggs. He also recommended $3 \mu\text{g/g}$ as the toxic threshold for selenium in aquatic food-chain organisms consumed by fish. Lemly reported that when waterborne concentrations of inorganic selenium (the predominant form in aquatic environments) are in the 7 - to $10\text{-}\mu\text{g/L}$ (ppb) range, bioconcentration factors in phytoplankton are about $3,000$. Consequently, he concluded that patterns and magnitudes of bioaccumulation are similar enough among various aquatic systems that a common number, $2 \mu\text{g/L}$ (ppb; for filtered samples of water), could be given as a threshold for conditions "highly hazardous to the health and long-term survival of fish".

Recently, Hamilton (1998) reviewed the demonstrated and potential effects of selenium on six species of endangered fish in the Colorado River basin, including the humpback chub (*Gila cypha*), Colorado squawfish (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), razorback sucker, flannelmouth sucker (*Catostomus latipinnis*), and roundtail chub (*Gila robusta*). Hamilton presents historical data supporting a hypothesis that long-term selenium contamination of the lower Colorado River basin may have been one of the factors contributing to the disappearance of endangered fish in the early 1930's. Contemporary issues of concern included the unusually high incidence of abnormal lesions on fish in the San Juan River, especially flannelmouth sucker, attributed to pathogens requiring inducement by stressors such as high contaminant concentrations or poor body condition. Other concerns included concentrations of selenium in fish eggs as high as

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28 $\mu\text{g/g}$ in razorback sucker from the Green River and as high as 73 $\mu\text{g/g}$ in eggs of rainbow trout collected from the mainstem Colorado River between Glen Canyon Dam and Lee's Ferry. In controlled studies of larval razorback suckers fed food organisms collected from the wild, Hamilton found 2.3 $\mu\text{g/g}$ or more of selenium in the diet to be sufficient to cause reduced survival. In an enclosure study where razorback suckers were held in selenium-contaminated aquatic environments (Adobe Creek, 9-90 $\mu\text{g/L}$ (ppb) selenium, and North Roadside Pond of Ouray National Wildlife Refuge, 40 $\mu\text{g/L}$ (ppb) selenium) for 9 months, muscle plugs contained 17 and 12 $\mu\text{g/g}$ selenium respectively and eggs contained 44 and 38 $\mu\text{g/g}$ selenium. Finally, Hamilton stressed that consideration of selenium effects was an important component of recovery planning for the Colorado River basin endangered endemics.

Desert Pupfish: Specific data exist to support a conclusion that the desert pupfish would be at risk from chronic selenium concentrations on the order of 5 $\mu\text{g/L}$ (ppb). Setmire and Schroeder (1998) report on a field study of sailfin mollies in the Salton Sea area of California. The mollies were chosen as surrogate species to assess contaminant threats to the co-occurring endangered desert pupfish. Mollies and pupfish were simultaneously collected from one site and found to contain virtually identical whole-body selenium concentrations (Bennett 1997), which verified the utility of mollies as a surrogate indicator of pupfish exposure. During 1994, mollies were collected from 13 agricultural drains. For 10 of the 13 drains, whole-body selenium concentrations were in the range of 3 to 6 $\mu\text{g/g}$, a level designated by a panel of selenium researchers as "of concern" for warmwater fishes (USDI-BOR 1993, also see Gober 1994, CAST 1994, Ohlendorf 1996). Two of the other three drains that were sampled yielded mollies averaging >6 $\mu\text{g/g}$, a level designated by the panel of researchers as exceeding the toxic threshold for warmwater fishes. Unfortunately, contemporaneous measures of waterborne selenium in the sampled drains were not obtained for comparison to the molly tissue data.

An inquiry with California's Colorado River Basin Regional Water Quality Control Board yielded file data on waterborne selenium for one of the 13 drains sampled for mollies in 1994; however the file data is for water samples collected in 1996 (R. Lukens, Regional Water Quality Control Board, pers. comm.). Ten monthly (March to December, 1996) measures of waterborne selenium in the Trifolium 12 drain averaged 4.96 $\mu\text{g/L}$ (ppb). Sailfin mollies collected from Trifolium 12 drain in 1994 averaged 3.6 $\mu\text{g/g}$ whole-body selenium, with a maximum of 3.8 $\mu\text{g/g}$ (n=3). If the concentrations of selenium in the drain were roughly the same in 1994 as in 1996, then a concentration on the order of 5 $\mu\text{g/L}$ (ppb) would be associated with expected pupfish tissue concentrations of selenium at the "level of concern." Borderline exposures for direct toxic effects may be particularly hazardous at the Salton Sea because of the recent record of diverse and frequent epizootic events documented for fish and birds at the Sea. It is well established for birds that selenium-induced immune dysfunction occurs at exposure levels below those required for direct selenium-poisoning. Until comparable studies are completed for fish, the safest assumption is that the results for selenium-induced immune dysfunction documented for birds may also apply to fish.

Harm in the form of reduced reproductive success and increased vulnerability to pathogen challenge (that could result in injury or mortality) could occur depending on the sensitivity of this species to the water conservation-related increases in selenium concentrations. Mortality is

possible for desert pupfish larvae depending on their specific sensitivity and the actual concentrations that result from the water conservation. The average concentrations in the drains that are expected with water conservation (2.2 to 11.7 $\mu\text{g/L}$) are not anticipated to result in direct mortality in the adult population, although peaks in concentrations, depending on their magnitude and duration, may result in adult mortality. These changes will affect slightly over half (29 of 52) of the agricultural drains that are currently occupied or potential habitat for the desert pupfish. This habitat has been identified as necessary for recovery of the species.

Salinity Effects

The salinity of the Salton Sea is expected to increase more rapidly with the proposed project than under the baseline. Pupfish have a high salinity tolerance, and they have been shown to survive salinities higher than 90 ppt. The Salton Sea Accounting Model (SSAM) predicts that the salinity will exceed 90 ppt after the end of the water transfer term under the baseline. With the proposed project the salinity is expected to exceed 90 ppt in 2027. This is 58 years sooner than under the baseline. The desert pupfish conservation measures call for the creation of connections between the drains to allow for inter-drain movement when the Salton Sea salinity has exceeded the 90 ppt threshold. A lower threshold will be used if new information suggests that it is appropriate. Because these connections will be in place prior to the Salton Sea salinity exceeding 90 ppt (or lower as appropriate), no harm should result from the salinity of the Salton Sea exceeding the 90 ppt threshold. However, these connections will require structural changes in the drain configurations. The construction and maintenance of these connections may result in injury or mortality of desert pupfish. This construction activity in the occupied portions of the drains is expected to require the use of heavy equipment to open the connections between drains, but we anticipate that it will be limited to a single connection of similar width as existing drains that intersects each drain once. The need for maintenance can be managed to some degree by controlling the slope of the connections to minimize sediment build up to the extent that this does not detract from the habitat conditions required by pupfish. Given the average frequency of similar activities in the Imperial Valley and the management opportunity described above, we anticipate that 20% of the connections would require maintenance annually. It is very difficult to survey for this species, so the number of pupfish impacted by this activity cannot be quantified at this time. There are 29 drains at the south end that will require connection (in three groups as the existing river deltas form barriers) and 23 drains at the north end (in two groups again as a result of the existing river delta functioning as a barrier).

Without these connections, pupfish would be isolated within individual drains, and the drains would be subject to random events such as run off of excess fertilizers, low dissolved oxygen events, and pesticide spills that could result in direct mortality of the pupfish within the drains where these events occur. To maintain the drain population, pupfish need to be able to move out of the drains when conditions become inhospitable and to move back into drains and re-establish themselves when conditions return to normal. We anticipate that without these connections, pupfish drain populations would ultimately be lost as such stochastic events eliminate individual drain populations one by one. The loss of these drain populations would limit the ability to recover the species. These connections are expected to provide an overall benefit to drain pupfish populations that should offset any short-term impacts associated with their construction.

Physical Effects

The extension of the drains that occurs unaided as the elevation of the Salton Sea declines may not allow for pupfish movement below the existing occupied areas depending on the configuration formed as a result of the flow and gradient. The Salton Sea bathymetry is currently not adequately mapped to determine if subsurface physical barriers are present between drains that will interfere with pupfish movement as the elevation of the Salton Sea declines with the proposed project. The removal of such physical barriers is anticipated to require minor construction along the lengths of the drains and shoreline of the Salton Sea. Because the disturbance associated with this construction is anticipated to be less than that associated with construction of the inter-drain connections, it is likely that harm of desert pupfish will be minimal as a result of this activity. As stated previously, this species is very difficult to survey so the number of individuals affected cannot be quantified at this time.

The pupfish refugium established as part of Pupfish Conservation Measure 1 will require regular maintenance to control vegetative growth and maintain the appropriate habitat conditions for desert pupfish. It is anticipated that this will result in harm in the form of temporary disturbance of the habitat. Use of heavy equipment could result in mortality of some fish. As described above for other construction activities, it is not possible to quantify this harm in terms of numbers of fish impacted. Overall, the maintenance will benefit the pupfish by maintaining the appropriate habitat conditions so the impacts associated with this activity should be offset by the benefits.

Monitoring activities necessary to implement the pupfish conservation measures will require capture of the pupfish using minnow traps. As part of the desert pupfish conservation measures, the Bureau will be developing a more consistent method to census this species. However, we still anticipate that some form of capture will be required for these surveys. In some limited cases there may be mortality associated with the current procedure as a result of unanticipated changes in water quality conditions. In most cases the pupfish are expected to be released without harm. It is hoped that the new procedure will reduce or eliminate the potential for such losses.

As part of the conservation measures for desert pupfish, selenium management measures (e.g., splitting combined drain flows and managed marsh outfall pipes) may have to be constructed to reduce selenium concentrations in some or all of the pupfish drains. These structures are not expected to require major modifications of the entire surface drain, but some construction will be required at the connection points. Some pupfish may be harmed or killed during this construction, but the extent should be limited because the fish will have the ability to seek shelter in unaffected portions of the drains. The long-term benefits of reducing the selenium concentrations should offset any short-term losses that occur.

Desert Pupfish Summary

Given the current state of our knowledge, our greatest concern for the pupfish is associated with the increases in selenium concentrations anticipated with water conservation. While not part of designated critical habitat, the drain pupfish populations have been identified in the Recovery Plan as necessary for long-term survival and recovery. Therefore, no critical habitat would be adversely

modified as a result of the proposed fish and wildlife conservation measures or water conservation activities, but recovery could be precluded without the ability to identify and respond to increases in selenium concentrations that have the potential to impact reproduction or survival (via reduced ability to respond to pathogen challenge) in time to prevent the loss of this population. We are currently conducting studies on selenium toxicity to desert pupfish. Reclamation and/or its conservation agreement partners will be providing the necessary funding to complete those studies in a timely fashion (5-7 years). Concurrently, Reclamation and its conservation partners will be conducting baseline surveys of the selenium concentrations in the potential pupfish drains and carrying out pupfish surveys (using the existing protocol as an interim measure). Therefore, considerably greater information should be available prior to the conversion from the fallowing associated with the 15-year minimization of project impacts, thus providing a more certain context in which to evaluate the baseline selenium concentrations and those that result from the implementation of on-farm and system water conservation. Specific trigger concentrations will be identified that when exceeded will result in the implementation of selenium control measures. It should be possible to identify the need for management action for selenium in advance of severe impacts by providing a thorough long-term monitoring program that closely tracks the selenium concentrations of the matrix or matrices being evaluated for these triggers. Because Reclamation has committed to providing for such a monitoring program that meets the approval of the Service and CDFG and to taking the appropriate management action in response to unacceptable selenium concentrations, we do not anticipate that this project will preclude the survival and recovery of the desert pupfish.

Because of the limited areal extent of disturbance associated with the construction of connections, removal of physical barriers, and construction of selenium management measures, these activities are not anticipated to preclude the continued existence of the desert pupfish. This conclusion is supported by the fact that desert pupfish have coexisted with a variety of agricultural activities since the drains were created, including a regular schedule of maintenance dredging.

No activities are planned within the area that has been designated as critical habitat for this species. Critical habitat has been designated within the San Felipe Creek watershed (San Felipe and Fish Creeks) upstream of the Salton Sea.

Yuma Clapper Rail

The Yuma clapper rail is known to use drain habitat with the appropriate vegetative cover in the Imperial Valley, and it will be affected by water conservation-related changes within the drains. These changes fall into two basic types: loss/degradation of vegetation as a result of increases in salinity of the drain flows and impacts to Yuma clapper rail reproduction resulting from increases in drain water selenium concentrations. Impacts to drain vegetation are not anticipated as a result of changes in drain flows of between 9 and 28 percent relative to current conditions (depending on the amount of water conserved through fallowing). Changes in flow in drains would be manifested as a total reduction in flow volume, with potentially shorter durations of peak flows and reduced frequency of peak flows. Periods of dryness likely would increase in frequency and duration, and potentially a greater number of drains would be dry at any given time. Nevertheless, the level of potential flow reduction in the drains is within the historic range of drain flows.

Salinity Effects

Agricultural drains support limited use by clapper rails. High-quality habitat for Yuma clapper rails consists of mature stands of dense or moderately dense cattails intersected by water channels. Clapper rails breed, forage, and find cover in this type of habitat. Clapper rails have also been reported using areas of common reed, although nesting is uncertain and density is lower than in cattail marshes. The IID drainage system is estimated to contain about 63 acres of cattails. Common reed, tamarisk, and arrowweed are the predominant species of the remaining 589 acres of vegetation estimated in the drainage system. The vegetation characteristics of the drains suggest the drains provide poor quality habitat for clapper rails. Home range sizes vary greatly; values of 0.3 to 27.4 acres/rail have been reported. However, in most cases the drains are unlikely to support a block of vegetation this size, which further suggests that habitat in the drains is of limited quality to clapper rails. Breeding has not been verified in the drains, but clapper rails have been documented in surveys of drains during the breeding season, suggesting that some breeding is occurring in drain habitats.

Much of the vegetation in the drainage system is tamarisk and common reed. These species are tolerant of a wide range of conditions. As such, they would adjust to flow changes in the drains, and their occurrence and distribution would not change substantially. Cattails and other wetland plants used as habitat by clapper rails are limited. Cattails are concentrated in the bottoms of drains. Because of the steep drain sides, little difference in water depths would occur with lower flow volumes. If drains were drier for longer periods of time, minor, temporary changes in the extent of cattails would potentially occur. Although such changes could not be quantified based on the hydrology model, they are believed to be small.

By increasing the ratio of tilewater to tailwater in the drains, the IID water conservation activities would increase salinity in the drains. Cattails are sensitive to salinity levels. Growth is best when water salinity is less than 3 g/L (3,000 ppm). Salinity levels of 3 to 5 g/L stunt the growth of cattails. Above 5 g/L (5,000 ppm), growth and survival of cattails are limited. The total amount of cattail vegetation estimated to be in the drains (63 acres) could potentially be reduced, as could the amount with good growing conditions. With conservation of 300 KAFY through on-farm and system-based measures, the acreage of cattails supported in the drains would potentially be reduced by 4 acres. An additional 23 acres of remaining cattail vegetation would be subjected to increased salinity levels that could stunt growth and reduce vigor of the plant. If all fallowing is used to conserve water, there would be no change in drain salinity and, therefore, no impacts to cattail vegetation. Use of fallowing to conserve a portion of the 300 KAFY would result in intermediate impacts. The loss or stunting of cattail vegetation in the drains constitutes a potentially adverse impact of IID's water conservation activities on Yuma clapper rails.

As part of its proposed rail conservation measures, Reclamation and/or its conservation agreement partners will create 31 acres of high quality managed marsh habitat (Rail Conservation Measure 1). The created habitat will be of substantially better quality for Yuma clapper rails than drain habitat because it will contain preferred plant species (i.e., cattails and bulrush), have better water quality, and be configured to provide an appropriate mix of dense vegetation interspersed with open water. While rails tend not to move during the breeding season once established unless forced to by

changing conditions (Bennett and Ohmart 1978), movements by unpaired males during the breeding season and by adults and juveniles during the non-breeding season allow birds to find new habitats (Eddleman and Conway 1998). The created habitat is anticipated to be managed in a similar manner as emergent freshwater marsh units are managed on the refuges and thus be attractive to clapper rails. With the overall increase in quantity and quality of clapper rail habitat in their U.S. range, the Service does not anticipate harm as a result of this potential impact. It is not necessary that the managed marsh be located in the Imperial Valley provided that the marsh is located in proximity to existing occupied habitat. The Service and CDFG will be consulted in locating the managed marsh.

Selenium Effects

Clapper rails also could be impacted through exposure to slightly higher concentrations of selenium in the drains as a result of IID's conservation actions. Following the methods described in the Draft HCP for IID's proposed water conservation and transfer program (Appendix C of the EIR/EIS [CH2MHill 2002]), potential impacts of increased selenium concentrations in the drains on clapper rail egg hatchability are predicted for IID's actions. Under current conditions, selenium concentrations result in hatchability impacts in approximately 3 percent of Yuma clapper rail clutches. As a result of IID's water conservation activities, hatchability impacts due to selenium could affect up to 6 percent of Yuma clapper rail clutches, comprising a 3 percent increase above current conditions.

Under the proposed Conservation Plan, Reclamation and/or its conservation agreement partners will create an additional 42 acres of high quality managed marsh to offset the impacts of increased selenium concentrations on clapper rail egg hatchability (Clapper Rail Conservation Measure 2). This acreage of managed marsh is in addition to the 31 acres created under Clapper Rail Conservation Measure 1 and would be phased in over 10 years. The selenium concentration of water used to support the managed marsh is expected to be close to 2 ppb. This selenium concentration is considerably lower than the selenium concentration in most drains in the IID water service area. Adverse impacts from selenium toxicity would be avoided in the managed marsh, and the quality of the managed marsh habitat would be further enhanced beyond that in the drains by design. While we still anticipate impacts to occur as a result of clapper rails foraging in the drains, such impacts would be limited. Given the maximum possible count of potentially breeding rails in drains was found to be on the order of 8 pairs (Holtville Main, Trifolium 1, and Bruchard combined), the increase in egg hatchability impacts is expected to affect at most a single Yuma clapper rail clutch. The additional acreage being created to offset this effect (42 acres) could accommodate 2 or 3 pairs. Because we expect the water quality in the created habitat to be better than what is in the drains, we expect a net increase in reproduction relative to the selenium-related impact.

Physical Effects

One additional potential source of habitat loss is the construction of lateral interceptors. Given that the entire drainage system has an estimated 63 acres of cattails and the lateral interceptor connections with any individual drain will be similar to the width of the drain itself, it is unlikely

that this construction activity will remove a measurable amount of cattail vegetation. Even if this were to occur, the impact would only be temporary. Cattails would be expected to return to the area as the conditions stabilized.

We anticipate some impacts associated with the rail conservation measures themselves. The clapper rails that come to occupy the marsh may be harmed during the protocol surveys required for monitoring. The use of taped vocalizations can result in the adults moving off the nest and exposing the eggs or chicks to predation or the elements thus resulting in the potential loss of those eggs or chicks. Some clapper rails could also be harmed as a result of the need to carry out management actions (e.g., burning) to maintain the long-term health of the 73 acres of managed marsh. Such disturbances will be temporary, infrequent (approximately every third or fourth year), and will result in an overall increase in habitat quality.

Yuma Clapper Rail Summary

The minor loss of Yuma clapper rail reproduction, potential harm associated with surveys, and potential harm associated with marsh management are not likely to preclude the survival and recovery of this subspecies when considered in the context that the majority of the population in the Imperial Valley is found on State and Federal wildlife refuges where habitat is managed specifically for Yuma clapper rails.

California Black Rail

The California black rail may use drain habitat with the appropriate vegetative cover and physical characteristics in the Imperial Valley (although such use has not been documented), and it may be affected by water conservation-related changes within the drains. Overall, drains do not support high-quality California black rail habitat. High-quality habitat for black rails consists of mature stands of dense emergent vegetation (particularly bulrush) with very shallow water levels and gently sloping shorelines. Black rails breed, forage, and find cover in this type of habitat. Black rails have also been reported using areas with cattails where water depths are adequately shallow. The IID drainage system is estimated to contain about 63 acres of cattails. Common reed, tamarisk, and arrowweed are the predominant species of the remaining 589 acres of vegetation estimated in the drainage system. The vegetation characteristics of the drains suggest the drains provide poor quality habitat for black rails. Telemetry studies at Mittry Lake found black rails to be sedentary, with home ranges averaging 1.2 acres or less (Flores and Eddleman 1991). The drains are unlikely to support a block of vegetation this size given their linear configuration, and the shape of the drain prism (steep sides and narrow bottom) is not conducive to black rail use. This suggests that habitat in the drains is of limited quality to black rails. Breeding by California black rails has not been verified in the drains.

The impacts that may occur to California black rails are very similar to those described above for the Yuma clapper rail. The changes that may affect them include increases in salinity and selenium concentrations as described above. Because the physical structure of the drains is even less likely to support use by black rails, we would expect even fewer pairs of this species to be affected. The additional acreage being created to offset these effects (73 acres) could include the appropriate

habitat characteristics to accommodate several pairs of black rails. Because we expect the water quality in the created habitat to be better than what is in the drains, we expect a net increase in reproduction relative to the salinity- and selenium-related impacts.

One additional potential source of habitat loss is the construction of lateral interceptors. Given that the entire drainage system has an estimated 63 acres of cattails and the use of the drains by black rails is expected to be very low, it is unlikely that this construction activity will remove a measurable amount of black rail habitat. Even if this were to occur, the impact would only be temporary. Emergent vegetation would be expected to return to the area as the conditions stabilized.

We anticipate some impacts associated with the rail conservation measures themselves. The black rails that come to occupy the marsh may be harmed during the protocol surveys required for monitoring. The use of taped vocalizations can result in the adults moving off the nest and exposing the eggs or chicks to predation or the elements thus resulting in the potential loss of those eggs or chicks. Some black rails could also be harmed as a result of the need to carry out management actions (e.g., burning) to maintain the long-term health of the 73 acres of managed marsh. Such disturbances will be temporary, infrequent (approximately every third or fourth year), and will result in an overall increase in habitat quality.

The minor potential loss of California black rail reproduction, harassment associated with surveys, and potential harm associated with marsh management, are not likely to affect the long-term status of the species, considering the small proportion of the species' rangewide population occurring in the drains at issue, as well as the minor and temporary disturbance anticipated in these habitats.

California Brown Pelican

The California brown pelican is present at the Salton Sea year-round. Peak numbers of this species are present during the summer months when large numbers of mostly juvenile birds come to the region as a result of dispersal from breeding colonies in Mexico. They will be impacted by the water conservation-related changes in salinity in the Salton Sea that reduce extensively the availability of fish in the Sea. For a smaller number of birds for which a forage base will remain, the impact will be in the loss of roost sites as the elevation decreases as a result of water conservation.

A small data set was available from the Sonny Bono Salton Sea NWR that included monthly counts of pelicans for the period of December 1999 through August 2001. The peak counts during that time occurred in June of 2000 and July of 2001 with an average for those peaks of 3,295 birds. This figure was then used in a Resource Equivalency Analysis (REA; NOAA 1995) to quantify the loss in bird use. Some assumptions were used in conducting this analysis. In consideration of the fact that tilapia are the predominant species of fish in the Sea (Costa-Pierce and Riedel 2000), their behavior makes them available to foraging pelicans (Glenn Black, CDFG, pers. comm.), and tilapia are believed to be the dominant fish in the pelicans' diet at the Salton Sea (Ken Sturm, Sonny Bono Salton Sea NWR, pers. comm.), we are making an assumption regarding loss of pelicans at the Sea relative to the estimated salinity threshold of this fish species. The decrease in pelican numbers is expected to occur more slowly at lower end of the salinity spectrum than at the higher end because

the tilapia is not expected to be affected, whereas the other fish species (orange-mouth corvina (*Cynoscion xanthulus*), Gulf croaker (*Bairdiella icistia*), and sargo (*Anisotremus davidsoni*)) that make up a small proportion of the diet are expected to be impacted at lower salinities. In the interval between 50 and 60 ppt, we assumed a loss of 10 percent of the pelicans currently using the Salton Sea. A 90 percent decrease was anticipated during the 60 and 65 ppt interval when impacts to tilapia are expected. We assumed a small population (25 birds) would remain at the Salton Sea as a result of the long-term availability of a small forage base at the river deltas and drains. A schedule of pelican numbers was developed with the water conservation activities and the minimization (15-year plan) and without the water conservation activities (baseline). The REA comparison yielded a figure for lost pelican-use years throughout the 45 years of the first term of the water transfer (12,383 lost pelican-use years). Because the fish population is expected to be limited to the river and drain mouths throughout the second term of the transfer, no additional impacts are anticipated from 2049 through 2078.

The restoration requirement is also based on the REA. After we determined the loss, we ran the credit calculation to determine an annual requirement for the operational period of the mitigation. In making this determination some parameters were set in advance. For the mitigation to offset the loss, it was determined that the structures should be in place in the year the 15 year minimization plan for the Salton Sea ends. Based on that start date and the length of the permit term, the REA was used to determine the annual requirement for that term needed to meet the CDFG fully mitigated standard. It was determined that full mitigation requirements would be achieved by providing for 1,200 pelicans with roost projects on the southern California coast.

A list of potential enhancement projects for brown pelicans was then developed that provided priorities based on the identified gaps in roost availability. The purpose of these concepts was to identify projects that could provide for a combination of roosts in the vicinity of foraging areas for 1,200 brown pelicans to offset the loss of such habitat at the Salton Sea. The outer Santa Barbara Harbor and San Diego Bay were identified as the top priority sites. The Santa Barbara Harbor site would replace a barge that as a result of very limited roost options in the area had a high level of documented use when it was temporarily moored in that area (Strong 2002a and 2002b). San Diego Bay has also been identified as a high priority site due to limited roost resources along the San Diego County coast (Strong 2002a, 2002b). San Diego Bay has a known forage base (Allen 1999) and offers protected waters that would provide for good roost opportunities with the addition of appropriate structures. These two sites will be required to meet the CDFG fully mitigated standard and are to be in place and functioning by 2018 (when the impacts beyond baseline changes begin), with other sites added as needed to achieve that mitigation requirement. Each site will need to demonstrate success as a roost through documented use by a minimum of 100 birds during three of the five initial years of surveys (to begin one year after implementation and occur monthly from June through October including day and night use). Credit toward the CDFG fully mitigated standard is additive between the two sites and will be determined based on peak use of the sites during those initial surveys. If full mitigation is not achieved with the first two projects, additional projects will be required. These additional projects should be implemented in a timely fashion such that they are in place by 2023. This deadline will be reconsidered by the Service and CDFG if the numbers of brown pelicans still using the Salton Sea are significantly higher than predicted.

Reclamation and/or its conservation agreement partners will provide for the placement of roosts adequate for use by 2,000 pelicans, with a minimum use requirement of 1,200 pelicans. The specific details regarding number, sizes, and locations of the roost structures will be determined based on the specific constraints of each site and on permit requirements of other agencies with jurisdiction over placement of the structures. Reclamation and/or its conservation agreement partners will provide adequate funds to support the management and monitoring of the roost structures annually throughout the water transfer term. There could be disruptions of pelican use in the future to carry out needed maintenance/replacement of the roost structures, which could result in temporary abandonment by those birds that otherwise would have used them. Such maintenance is anticipated to be required less than annually, with closure to last no more than three weeks. Any harm resulting from the increased energy requirements associated with longer travel between roosting and foraging areas that occurs during this activity is considered minor in comparison to the benefits accrued over the first project term.

Because the water conservation activities as described would maintain the salinity trajectory at essentially the baseline projection for the first 15 years, only minor impacts are anticipated to occur beyond any changes associated with the baseline conditions (i.e., loss of near shore roost sites associated with the baseline change in elevation). Some harm to brown pelicans resulting from the loss of roosts could occur as a result of the elevation difference of 0.6 feet between the water conservation activities and the baseline during the first 15 years, although we anticipate this to be small. Starting in the sixteenth year of the program, the salinity will increase and the bird numbers will decrease rapidly as compared to the baseline projection. The total loss of pelican use has been quantified at 12,383 pelican-use years. Because many of the post-breeding juveniles dispersing to the Salton Sea arrive in poor condition (Charlie Pelizza, Sonny Bono Salton Sea NWR, pers. comm. 2002), it is likely that at least a portion of these birds will not have adequate reserves to move to other foraging areas once the Salton Sea is no longer supporting an adequate fish population and would die as a result. The other pelicans that are not able to find adequate forage at the Salton Sea but are capable of moving on to other areas may be harmed by the lack of foraging opportunities and the depletion of energy reserves required for this additional migratory step. While this is expected to occur without the water conservation activities, the pace of the transition is faster with those activities.

The CDFG-required mitigation actions taken on the California coast should help offset these impacts. By providing roosts in proximity to existing forage fish resources, pelicans dispersing to the California coast during the non-breeding season will find additional roosts that will reduce their energetic requirements in moving from foraging to roosting areas. The increase in numbers of pelicans along the California coast during the non-breeding season is believed to result from dispersal of birds from Mexico, including some birds from the Gulf of California (USFWS 1983). Therefore, we anticipate that the Gulf of California breeding population that is believed to be the primary source of birds dispersing to the Salton Sea will benefit from the proposed brown pelican conservation measure.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological/conference opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Several projects are planned in the action area that may affect listed species in the Imperial Valley and/or Salton Sea. However, a number of these projects require action on the part of a Federal agency, and thus would require independent review under section 7 of the ESA. Therefore, the impacts of such Federal projects are not considered to be cumulative to the effects. Reclamation is the Federal lead agency on the Salton Sea Restoration Project, and the Service anticipates continuing to work with Reclamation to maximize the benefits and minimize the impacts associated with that project. The Inadvertent Overrun and Payback Policy is related to the QSA and will be overseen by Reclamation. The Colorado River Salinity Control Program is jointly funded by Reclamation, the Bureau of Land Management and the Department of Agriculture. This program provides for a variety of projects that maintain the salinity of the Colorado River below the designated thresholds. This is a factor in the overall salt loading to the Salton Sea. The Environmental Protection Agency is providing assistance (financial and technical) with the Mexicali Wastewater System Improvement Projects. Reclamation is the Federal lead agency on the Brawley wetlands demonstration project, and the Service intends to continue working with Reclamation to maximize the benefits and minimize the impacts associated with that project as it expands into other areas of the Imperial Valley. Several other projects on the southern California coast may benefit or impact California brown pelicans. These projects require Federal funding or approval and thus will require review under section 7 of the ESA. No cumulative effects were identified for the lower Colorado River, as projects occurring there that could impact federally listed species would involve modifications of wetlands and/or river operations, thus falling under Federal jurisdiction and requiring review under section 7.

Coachella Valley Water Management Plan

CVWD prepared the Coachella Valley Water Management Plan to provide an overall program for managing its surface and groundwater resources in the future. The objectives of this water management plan are to:

- Eliminate groundwater overdraft and its associated adverse impacts, including groundwater storage reduction, declining groundwater levels, land subsidence, and water quality degradation
- Maximize conjunctive use opportunities
- Minimize adverse economic impacts to Coachella Valley water users
- Minimize environmental impacts

The overall water management plan involves a number of actions to reduce the current overdraft of groundwater in the Coachella Valley through increased use of Colorado River water (reducing demand for groundwater pumping) and various recycling and water conservation activities to reuse

or decrease the consumption of water. A substantial portion of the additional Colorado River water to be used pursuant to the water management plan (up to 100 KAFY) is the conserved water to be transferred by IID to CVWD under the QSA. Other elements of this plan are not dependent on implementation of the QSA.

Some activities associated with the receipt and use of water under the QSA may result in changes in the flows or selenium concentrations of the agricultural drains within the CVWD. Increased flows and/or selenium concentrations may impact the habitat values associated with the drain extensions/connections created to minimize the impacts of water conservation. These changes may, in turn, result in impacts to listed species such as the desert pupfish and Yuma clapper rail. The desert pupfish may be subject to greater competition or predation from exotic species as a result of increased flows in the CVWD drains. Both the desert pupfish and the Yuma clapper rail may be impacted by increased selenium concentrations. However, the Service and CDFG are currently working with CVWD on components of a HCP that will either be incorporated into the Coachella Valley Multi-Species Habitat Conservation Plan or become a stand-alone HCP for Improvement District 1 (the area that can receive the conserved water from IID). We currently anticipate that the impacts associated with the receipt and use of the conserved water will be addressed in one of these two ways. We should have the results of the toxicity testing before measurable changes in selenium occur because the ramp-up rate for the transfer to CVWD is relatively slow and does not begin until 2008. Therefore, we do not anticipate unmitigated cumulative impacts to desert pupfish and Yuma clapper rails that use the drains as a result of the CVWD's receipt and use of water under the QSA. In addition, the connections created as part of this project may be designed to ameliorate some of the effects of increased flow if that is identified as a need at the time of implementation of Pupfish Conservation Measure 1.

Should CVWD not move forward with their HCP as planned, impacts could occur to the desert pupfish and Yuma clapper rail. Desert pupfish could be impacted by the increases in flows, which potentially favor exotic fish species that are competitors with or predators of desert pupfish. This is potentially the primary factor impacting the desert pupfish in the drains. The drains in the CVWD area that flow directly to the Salton Sea account for almost half of this drain habitat for the pupfish (23 of 52 total). Long-term occupation of these drains has been identified as necessary for the recovery of this species. The unmitigated effect of these changes could be significant. Rails could be impacted by potential increases in maintenance necessitated by the increased flows. Direct loss of eggs and chicks could occur if maintenance were to be carried out during the breeding season. However, these drains do not provide for a large proportion of the Yuma clapper rail population in the Salton Trough. Increased selenium concentrations resulting from the increased use of Colorado River water in the Coachella Valley could have the same effects as those described above for the water conservation activities on desert pupfish and rails.

Use of this water may change the salt balance within the Salton Sea as a result of the increase salt load in agricultural drain water from the Coachella Valley. This could impact the ability of the California brown pelican to continue foraging at the Salton Sea. However, this change was considered in the development of the 15-year minimization of impacts to the Salton Sea described above. As a result, the salinity will not materially deviate from that predicted for the baseline. The

desert pupfish will not be impacted as its connectivity requirements are being addressed through the desert pupfish conservation measures proposed as part of Reclamation's project.

MWD/CVWD State Water Project Water Transfer and Exchange

This project involves the exchange between MWD and CVWD of State Water Project water entitlements and Colorado River water. CVWD would transfer 35,000 AF of its State entitlement to MWD, and in exchange MWD would arrange for the delivery of 35,000 AF of Colorado River water to CVWD. Delivery may be made via the Colorado River aqueduct or the Coachella Canal. As this is simply an exchange of water with no changes in volume and only minor changes in salinity of CVWD's drain water and the Salton Sea, we do not anticipate any measurable changes in the habitat values for listed species.

Cabazon Power Plant

This project involves the construction of a 500-Megawatt natural gas-fired power generation facility on the Cabazon Indian Reservation in the Coachella Valley. The current plans call for the use of 5,000 AF of water from the Coachella Canal annually. This water would be used largely for cooling water and would be discharged to the Coachella Valley Storm Channel (Whitewater River). Currently, very few details are available about this project. Depending on the salinity of the discharge, it may function to increase or decrease the salinity of the Salton Sea. We do not believe there are adequate details to have considered this project in the development of the 15-year minimization plan, but the volume of water involved is relatively low. It is unlikely that this would cause a measurable increase in the salinity of the Salton Sea, and the discharge may function as dilution water if the salinity is below that of the Sea. No measurable cumulative effects to the California brown pelican are anticipated as a result of this project. The desert pupfish will not be impacted as its connectivity requirements are being addressed through the desert pupfish conservation measures proposed as part of Reclamation's project.

North Baja Powerline

The North Baja Powerline is a 6-mile powerline project in the southwest portion of the IID service area. The construction and maintenance of the powerline may result in the loss of riparian, wetland, and agricultural field habitats that may contribute to the impacts associated with the loss of these habitats from the proposed fish and wildlife conservation measures and interrelated effects of water conservation activities under consultation. However, because of the linear nature of the powerline project, habitat losses are not anticipated to occur in large blocks. The proposed fish and wildlife conservation measures and the interrelated effects of the water conservation activities under consultation includes replacement of lost habitat adequate to offset the impacts to the Yuma clapper rail and California black rail such that there would not be cumulative effects in combination with the North Baja Powerline.

Heber Wastewater Treatment System Project

This wastewater treatment plant serves the community of Heber, which is located approximately 5 miles north of the Mexican border in the Imperial Valley. The plant discharges to an agricultural drain that is a tributary to the Alamo River. The expansion of the plant would increase the discharge from 0.402 to 0.810 million gallons/day. At full capacity, the discharge from the plant would increase the inflows to the Salton Sea by 457 AFY. While this is a beneficial effect, it may not result in a measurable change in the salinity of the Salton Sea. There would be no cumulative effects to the California brown pelican or the desert pupfish as a result of this project.

Colorado River Basin Regional Water Quality Control Board's Watershed Management Initiative

The Watershed Management Initiative is the Colorado River Basin Regional Water Quality Control Board's (Regional Board) internal planning document for the Salton Sea Transboundary Planning unit. This watershed is the priority watershed within the Region. The watershed has been determined to be impaired, and this plan provides the guidance to addressing these impairments. The implementation of this plan should improve the water quality within the watershed and thus benefit a variety of species. Specific actions within the plan include the Total Maximum Daily Load Program discussed below.

Total Maximum Daily Load Program

Pursuant to the requirements of the Clean Water Act, the Regional Board has identified and ranked "impaired water bodies" within their Region for which Total Maximum Daily Loads (TMDLs) need to be established. The Regional Board will develop and adopt a TMDL for each combination of an impaired water body and a constituent of concern and will develop the necessary implementing actions to achieve the TMDL. The TMDL is anticipated to result in improved water quality in the drains, rivers and Salton Sea, thus benefitting a variety of species. While some measures to control constituents of concern may result in reduced drain flows and ultimately reduced inflows to the Salton Sea, many of these types of measures would also function to conserve water and therefore would not be expected to be additive to the proposed fish and wildlife conservation measures and the interrelated effects of the water conservation activities under consultation. In most cases we anticipate that the majority of measures will involve Best Management Practices that do not reduce the inflows substantially. Therefore, we do not anticipate measurable cumulative effects to the California brown pelican or the desert pupfish.

Coachella Valley/Salton Sea Non-Point Origin Source Project

The Coachella Valley Storm Channel carries agricultural drain water, treated municipal effluent, and runoff into the Salton Sea. The Coachella Valley/Salton Sea Non-Point Origin Source Project seeks to address non-point source pollution entering the Salton Sea and the Coachella Valley Storm Channel. The lead agency for that project is the Torres-Martinez Band of Desert Cahuilla. That effort includes groundwater protection, wetland treatment cells for agricultural drain water, Best Management Practices for controlling non-point source pollution, and raising public awareness and

participation in pollution prevention. The wetlands would reduce the movement of nutrients into the Salton Sea, particularly nitrogen. Phosphorus, however, is considered the limiting nutrient in the Salton Sea system so reductions in eutrophication of the Salton Sea at this scale are not expected to be measurable. The wetlands will also increase evapotranspiration of the water, thus reducing slightly the volume of flow in the Coachella Valley Storm Channel. Because these wetlands are small and would have only a minor impact on the inflows to the Salton Sea, measurable cumulative impacts to listed species are not anticipated as a result of this project.

Allegretti Farms Increased Groundwater Pumping in the San Felipe Creek Watershed

Allegretti Farms was recently granted a conditional use permit by Imperial County to increase groundwater production for agricultural use from 12,000 acre-feet/year to up to 27,000 acre feet/year (10 acre-feet/acre of farmable land). The project proponent provided a hydrological study in support of their application that concluded that the deep aquifer being tapped for their agricultural operation was separate from the shallow aquifer that supplies perennial flows to San Felipe and Fish Creeks. The report went on to conclude that the run-off from the agriculture may in fact contribute to the shallow spring flow supporting the pupfish habitat. This hydrology report has not undergone independent review, but it does suggest that the desert pupfish and its designated critical habitat would not be impacted by the increase in groundwater pumping. Only continued monitoring of the habitat will provide the necessary information to confirm or refute the conclusions of the hydrological study. The cumulative effect of this activity on the desert pupfish cannot be determined at this time.

CONCLUSION

After reviewing the current status of the species, the environmental baseline from the action area, the effects of implementation of all of the proposed fish and wildlife conservation measures concurrent with the interrelated effects of the water conservation activities, and the cumulative effects, it is the Service's biological opinion that the implementation of the proposed fish and wildlife conservation measures concurrent with the interrelated effects of the water conservation activities is not likely to jeopardize the continued existence of the desert pupfish, Yuma clapper rail, and California brown pelican. The proposed voluntary fish and wildlife conservation measures, as a package, adequately avoid and/or minimize impacts such that survival and recovery of these species are not precluded. The proposed fish and wildlife conservation measures and interrelated water conservation activities are not likely to destroy or adversely modify critical habitat for the desert pupfish, as designated areas only occur outside the action area.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4 (d) of the ESA prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as

Yuma Clapper Rail

The Service anticipates that 1 Yuma clapper rail clutch could be lost annually as a result of selenium concentration increases in the IID drains associated with water conservation. All of the Yuma clapper rails that come to occupy the 73 acres of marsh created to minimize the impacts of the water conservation activities may be harmed as described in the effects analysis as a result of the need to conduct protocol surveys that require the playing of taped vocalizations as often as annually to confirm the proper function/condition of the habitat for rail use. On an intermittent basis (once every three to four years) the rails occupying the marsh could be harmed as a result of management measures carried out to improve habitat quality. Because the disposition of the managed marsh at the close of the water transfer agreement has not been determined, no minimization measures have been incorporated to offset the impacts of potential closure. Therefore, no take is exempted for this activity.

California Brown Pelican

The Service anticipates the incidental take of California brown pelican as the loss of 12,383 bird-use years resulting from the increased rate of salinization of the Salton Sea and subsequent accelerated loss of the forage base for this species. Over the course of the years that these impacts will occur, this loss in bird use functionally equates to the number of birds impacted. This loss is anticipated to result in harm to all pelicans affected by this change and mortality to some unquantifiable (this will vary from year to year depending on foraging conditions in the Gulf of California) portion as a result of inadequate body condition to find alternative foraging sites. We also anticipate harm in the loss of roost sites for pelicans remaining at the Salton Sea as a result of the greater elevation decline associated with this project. The number affected by this change cannot be quantified as it will depend on the forage base that remains available at the river and drain mouths, but we anticipate a minimum of 25 birds would be affected annually. Lastly, we anticipate harm to an unknown number of California brown pelicans as a result of the temporary inaccessibility of the created roosts on the California coast as needed for periodic maintenance.

The Service will not refer the incidental take of any migratory bird for prosecution under the Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. §§703-712) if such take is occurring in compliance with the terms and conditions (including amount and/or number) specified herein.

REASONABLE AND PRUDENT MEASURES

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of desert pupfish, Yuma clapper rail, and California brown pelican.

1. Measures shall be taken to minimize the mortality or injury of listed species associated with the loss of existing habitats.
2. Measures shall be taken to minimize the mortality or injury associated with selenium contamination in existing and created listed species habitats.

3. Measures shall be taken to minimize the mortality or injury of listed species associated with construction and maintenance/management of created habitats.

4. Measures shall be taken to minimize the mortality or injury associated with monitoring activities for listed species that are required to guide the implementation of or assure the success of the proposed fish and wildlife conservation measures.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Reclamation must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary.

1. The following terms and conditions implement reasonable and prudent measure 1:

1.1 Reclamation and its conservation agreement partners shall configure all drain extensions in the IID and CVWD areas to maximize pupfish habitat and achieve no net loss of pupfish habitat in terms of drain length and width dimensions (i.e., areal extent) as the Salton Sea recedes.

1.2 Reclamation and its conservation agreement partners shall provide for the creation of roost structures for California brown pelicans that are anticipated to continue to forage on the limited remaining fish at the river and drain mouths to offset the loss of existing roosts when the Salton Sea elevation drops below -235 feet. It may be possible to modify existing structures (e.g., Mullet Island or its surroundings) to preclude predator access to achieve this goal. The structures shall meet with the approval of the Service and CDFG and shall be sized to accommodate a minimum of 25 pelicans.

2. The following terms and conditions implement reasonable and prudent measure 2:

2.1 Reclamation and its conservation agreement partners shall monitor selenium concentrations in the desert pupfish drains to assure that unanticipated impacts resulting from selenium exposure are not likely to occur. The study program set forth in Pupfish Conservation Measure 2 for determining potential selenium impacts shall include collection of baseline data for selenium concentrations in water, sediments, prey items, and surrogate fish species in the pupfish drains. Any long-term monitoring program for selenium impacts to desert pupfish shall include collection of data for tissue concentration, water concentration, or dietary concentration, as appropriate based on the results of the study program. The monitoring plan shall be developed in coordination with, and subject to the approval of, the Service and CDFG.

2.2 Reclamation and its conservation agreement partners shall develop a habitat creation plan for the managed marsh that includes design features to minimize the

for selenium bioaccumulation in Yuma clapper rails and thus reduce the harm potentially associated with such bioaccumulation. This habitat creation plan shall be approved by the Service and CDFG prior to its implementation.

3. The following terms and conditions implement reasonable and prudent measure 3:

- 3.1 Reclamation and its conservation agreement partners shall design the inter-drain connections discussed in Desert Pupfish Conservation Measure 1 to minimize the maintenance requirements that could result in take of desert pupfish to the extent possible without significantly reducing their habitat value.
- 3.2 Where dewatering is required for construction of pupfish connections, Reclamation and its conservation partners shall implement gradual dewatering of the construction sites within potential pupfish drains to allow desert pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all desert pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.
- 3.3 Reclamation and its conservation agreement partners shall provide for adequate water to maintain appropriate habitat conditions for survival and reproduction of desert pupfish in the desert pupfish refugium.
- 3.4 Reclamation and its conservation agreement partners shall provide for funds and personnel to implement management of the pupfish refugium. Such management shall be conducted in a manner that minimizes the need for routine use of heavy equipment that could result in injury or mortality of pupfish in the refugium. Reclamation and its conservation agreement partners shall develop a management plan for the refugium that specifies the management procedures and schedule including the anticipated frequency of use of heavy equipment in the refugium. This management plan shall be developed in coordination with, and subject to the approval of, the Service and CDFG. Should more extreme management measures be required as a result of unanticipated circumstances, use of any unapproved procedures shall require the prior approval of the Service and CDFG.
- 3.5 Reclamation and its conservation partners shall immediately notify the Service and CDFG regarding any needed emergency repairs on the pupfish connections, pupfish selenium management measures, rail created habitat, or pelican roost structures that may result in disturbance of or impacts to the listed species so that the Service and CDFG can provide technical assistance to minimize the impacts associated with implementing the repairs.

- 3.6 Reclamation and its conservation partners shall implement any necessary management measures to maintain the habitat quality of the created rail habitat outside the Yuma clapper rail and California black rail breeding season of March 1 through September 15. This will avoid the injury or mortality of rail eggs and/or chicks.
- 3.7 Reclamation and its conservation agreement partners shall schedule regular maintenance of the created pelican roosts during the month of December to minimize disturbance of migrating pelicans and the resident population that could result in harm through a lack of access to dry sites where the birds can roost and maintain their plumage. Exceptions to this scheduling shall be approved by the Service and CDFG.

4. The following terms and conditions implement reasonable and prudent measure 4:

- 4.1 Survey methods for desert pupfish shall include the use of wire minnow traps with or without bait until superceded by a new Service and CDFG-approved protocol. Wire traps have proven to be more effective in comparison trials than other trap materials such as plastic, thus giving a more accurate evaluation of the status of the desert pupfish population.
- 4.2 Minnow traps shall be set during daylight hours only and will be checked for the presence of desert pupfish at least every three hours. There shall be no overnight trapping, as this has resulted in mortality of pupfish during low dissolved oxygen conditions that occur at night.
- 4.3 Handling may involve taking length measurements to assess size and age class of individuals and shall require minimal exposure out of water. Any pupfish exhibiting signs of physiological stress shall be released immediately at the point of capture to minimize the potential for injury associated with such stress.
- 4.4 Surveys for Yuma clapper rails shall be conducted in accordance with the approved Service protocol (Attachment C) to assure comparability with other survey efforts and minimize harassment unless authorized in advance by the Carlsbad Fish and Wildlife Office.
- 4.5 Disturbance to the rails during the breeding season shall be minimized to the maximum extent possible within the constraints of the survey protocol to reduce the chances of nest abandonment or other impacts to reproductive success.
- 4.6 Taped calls are to be used only to initially locate individual rails, and not to elicit further behavior from rails to reduce the chances of nest abandonment or other impacts to reproductive success. Tapes shall not be used to elicit responses from rails if the surveyor detects the presence of potential avian or mammalian predators that could injure or kill rail adults, chicks or eggs.

- 4.7 Survey activities shall not be conducted during inclement weather conditions that would significantly reduce the ability to detect the rail species or expose rail nest contents to the elements (e.g., rain or strong wind) thus resulting in the failure of eggs to hatch or reducing chick survival.
- 4.8 Personnel conducting the survey/monitoring activities shall have a section 10(a)(1)(A) permit issued by the Service to work with the desert pupfish and/or Yuma clapper rail (as appropriate) or have adequate qualifications and experience based on a review by the Service to qualify for such a permit to assure that the above terms and conditions are appropriately implemented and take is minimized.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of the incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded or the terms and conditions are not complied with, such incidental take represents new information requiring review of the reasonable and prudent measures provided and reinitiation of consultation. Reclamation must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures. Operations must be stopped in the interim period between initiation and completion of the new consultation if it is determined that the impact of the additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(I).

Reporting Requirements

Reclamation shall submit reports of the previous year's activities to the Service and CDFG by March 31 of each year. This report shall include a summary of the fish and wildlife conservation actions implemented in the previous year along with the results of any monitoring/survey activities conducted. The report will also include basic statistics on the water conservation activities in the Imperial Valley (e.g., water conservation activities implemented, volume of water conserved, and acres fallowed for water conservation). The Service and CDFG shall have access to the raw data from monitoring activities for review upon request. The reporting will occur annually unless the Service and CDFG approve a longer reporting interval.

The Service's Carlsbad Fish and Wildlife Office (760-431-9440) must be notified within three working days should any listed species be found dead or injured in or adjacent to the action area. A written notification must be made within five calendar days and include the date, time, and location of the discovered animal/carcass, the cause of injury or death, and any other pertinent information. Injured animals should be transported to a qualified veterinarian or certified wildlife care facility and the Service informed of the final disposition of any surviving animal(s). All dead specimen(s)/carcass(es) shall be submitted to (1) educational/research institutions possessing the appropriate State and Federal permits, (2) Carlsbad Fish and Wildlife Office, or (3) Division of Law Enforcement (contact 310-328-1516 for further direction). Failing deposition to one of these entities, the carcass should be marked, photographed, and left in the field.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans or to develop information. The recommendations provided here do not necessarily represent complete fulfillment of the agency's 7(a)(1) responsibility for these species.

1. The Service recommends that Reclamation continue to utilize its authorities to study ways to address Salton Sea restoration for the benefit of not only listed species but a wide variety of migratory birds as well.
2. Reclamation and its conservation agreement partners should consider conducting experimental trials to identify silt removal techniques and seasonal timing that minimize the injury or mortality of desert pupfish that may be associated with removing silt from the connections as necessary maintain suitable conditions for use by desert pupfish.
3. Reclamation and its conservation agreement partners should consider implementing a program to monitor wintering mountain plovers in the Imperial Valley. This monitoring should include annual surveys for mountain plovers on a valley-wide basis. In the initial monitoring effort data would be collected to identify the habitat use patterns and winter foraging habitat requirements for this species in the Imperial Valley. A minimum of three consecutive years of data collection on habitat use/requirements would be required. This data in combination with the annual plover surveys and information on agricultural patterns throughout the Imperial Valley would be used by the Service to determine the magnitude of crop changes and subsequent potential impacts to the mountain plover so that appropriate management actions would be identified prior to losses of a magnitude that could interfere with survival and recovery. The 15-year plan provides for adequate time to complete these surveys prior to any major water conservation-related crop changes in the Imperial Valley. Three consecutive years of data collection and evaluation of that information can be accomplished before the acreage of fallowing exceeds 10,000 acres (in 2007 at the earliest, based on the current delivery schedule). This increment of 10,000 acres of fallowing is less than 5 percent of the average acreage of the preferred crop types. Such a change is not likely to impact the survival and recovery of the species.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the proposed action as outlined in the BA that accompanied your July 23, 2002, request for initiation and the Errata to the BA that you submitted to this office. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary

Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. Please contact me or Carol Roberts of my staff at (760) 431-9440 if you have any questions regarding this biological/conference opinion document.

Attachments:

Figure 1.1 - Imperial Irrigation District

Figure 1.2 - Salton Sea

Attachment A - General Approach to Monitoring Changes in Suitable Breeding Habitat for the Southwestern Willow Flycatcher

Attachment B - Feasible off-site mitigation options for brown pelicans

Attachment C - Yuma Clapper Rail Survey Protocol

Attachment D - Chronology of the Imperial Irrigation District Water Transfer and Habitat Conservation Plan

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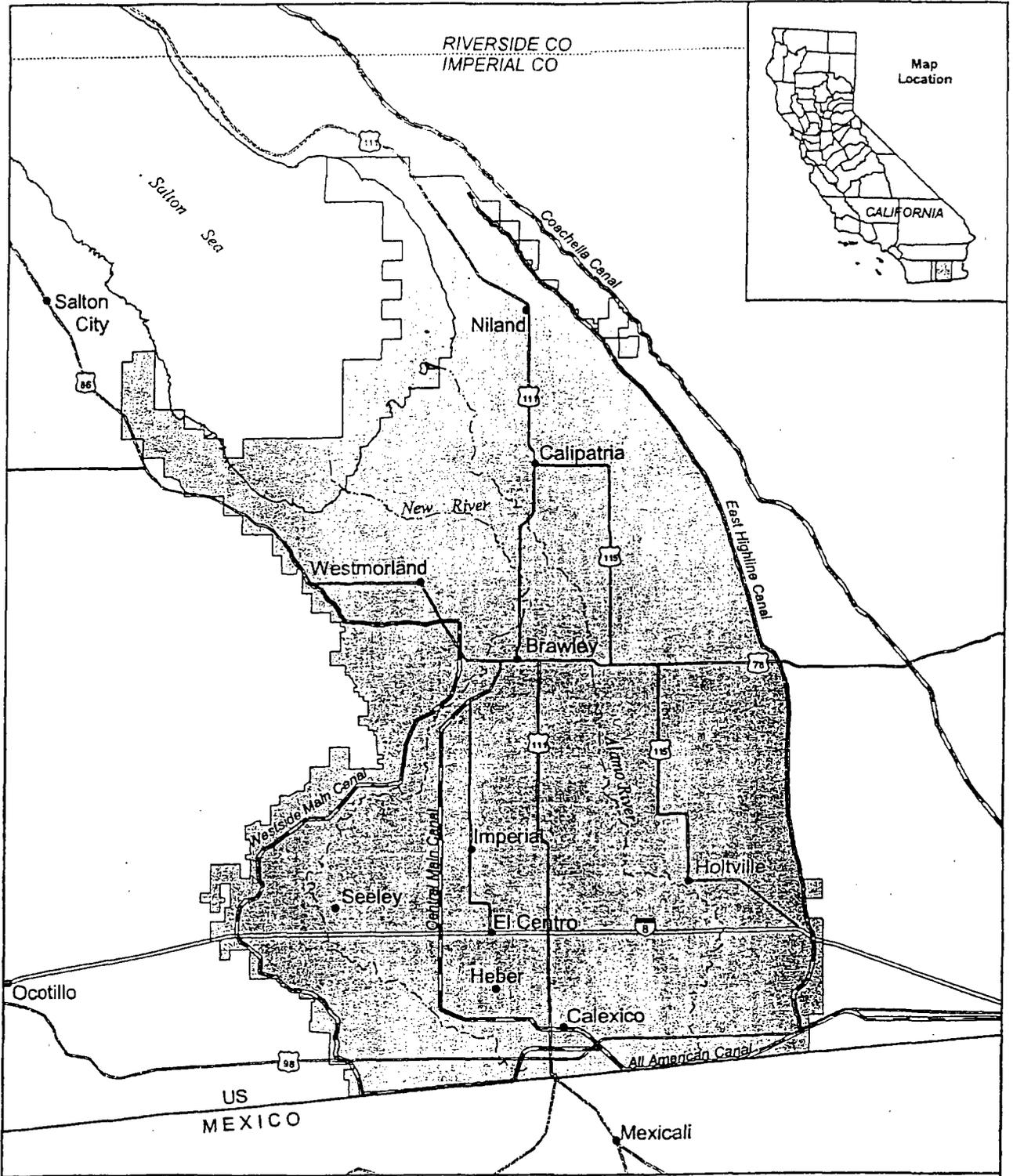
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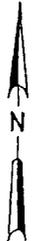
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-  IMPERIAL IRRIGATION DISTRICT WATER SERVICE AREA
-  AQUEDUCT/CANAL
-  COUNTY LINE
-  INTERSTATE HIGHWAY
-  REGIONAL HIGHWAY
-  INTERNATIONAL BORDER
-  RIVER
-  CITIES

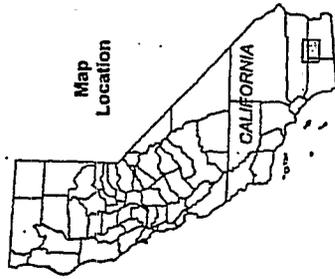


5 0 5 Miles

SCALE IS APPROXIMATE

Source: University of Redlands 1999; DOI 1999; and Reclamation 1999

Figure 1-1
Imperial Irrigation District

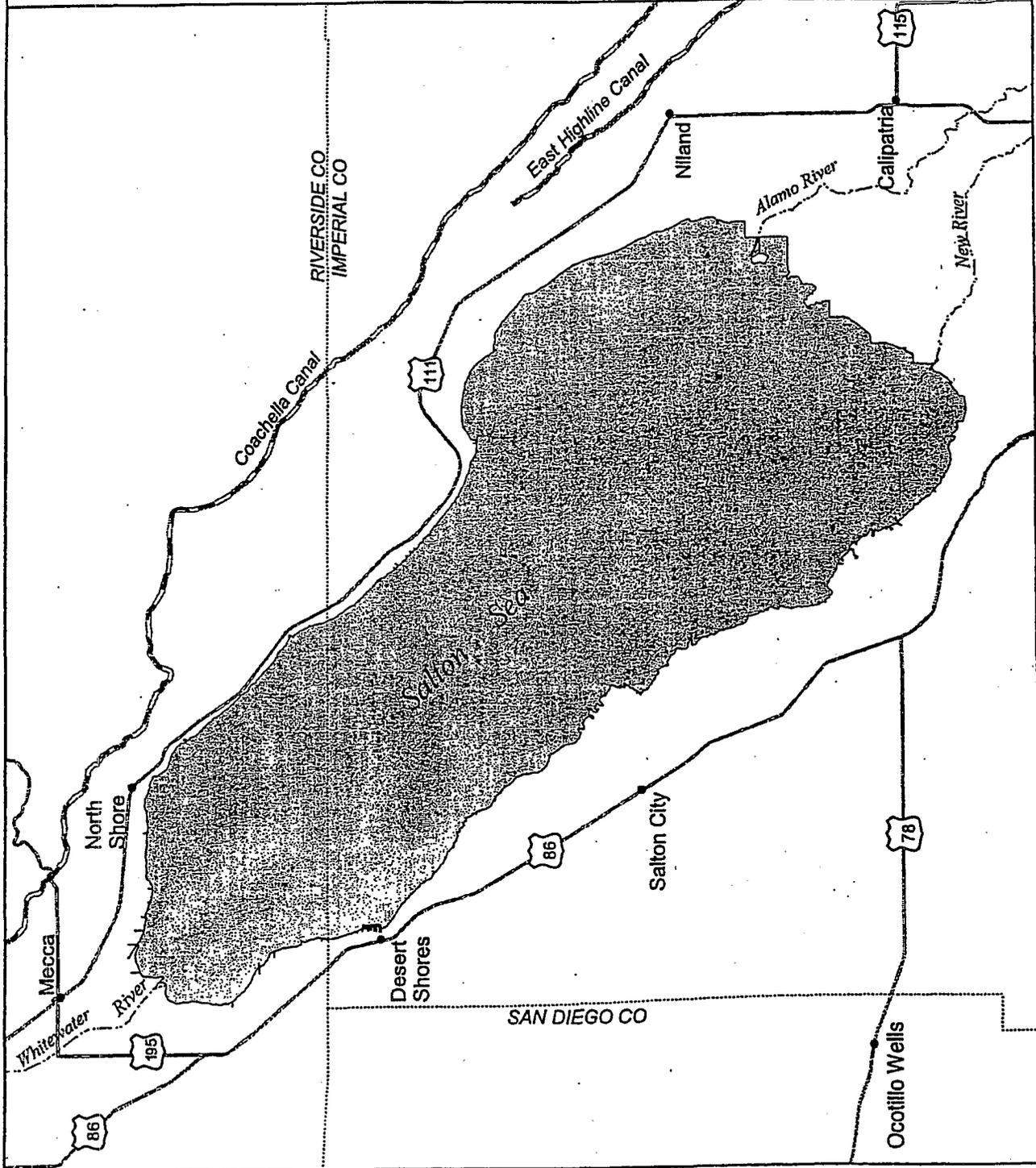


- SALTON SEA
- AQUEDUCT/CANAL
- COUNTY LINE
- INTERSTATE HIGHWAY
- REGIONAL HIGHWAY
- RIVER
- CITIES

Source:
University of Redlands
1999; DOI 1999;
and Reclamation 1999

3 0 3 Miles
SCALE IS APPROXIMATE

Figure 1-2
Salton Sea



Attachment A

General Approach to Monitoring Changes in Suitable Breeding Habitat for the Southwestern Willow Flycatcher

Under Willow Flycatcher Conservation Measures 1 and 2, Reclamation and its conservation agreement partners will conduct a baseline survey and periodic subsequent surveys to quantify net changes in the total amount of suitable breeding habitat for the willow flycatcher in areas adjacent to the Salton Sea, East Highline Canal, and planned lateral interceptor projects. Areas of suitable breeding habitat would be mapped using the most appropriate technology (e.g., aerial photography and satellite imagery). As appropriate and necessary, a geographic information system (GIS) of the habitat data will be developed.

The same process will be used for conducting the subsequent surveys. Mapped areas will be revisited to determine if there have been changes in the extent of suitable breeding habitat in each area. The boundaries of the mapped areas of suitable breeding habitat will be updated as appropriate. In addition to revising the mapped areas, every five years Reclamation and its conservation agreement partners will acquire recent (no greater than one year old) Digital Orthophoto Quarter Quadrangles (DOQQs) or aerial photographs and review them to determine if tamarisk has colonized new areas. If the photographs indicate that suitable breeding habitat for willow flycatchers may have developed in new areas, these new areas will be surveyed and mapped using the same methods as for the baseline surveys. The GIS, if one was developed, will be updated accordingly. Reclamation and its conservation agreement partners will submit a report of the baseline and subsequent surveys to the Service and CDFG within six months of completing the surveys.

ATTACHMENT B

Feasible off-site mitigation options for brown pelicans

Location	Roost Site	Forage Base Enhancement	Action	Remarks
Santa Barbara(Outer)	X		Place and anchor barge	Historically provided habitat for about 1,000 brown pelicans
San Diego Bay (South)	X		Install appropriate structures, such as pilings at individual sites	Several sites currently used by brown pelicans. Surveys for suitable sites needed.
Buena Vista Lagoon	X	X	Install floating docks. Create islands from dredge and spoil material. Install tidal flood gate.	No current use by brown pelicans.
Moss Landing – Salt Ponds Enhancement	X		Operate/maintain tidal flood gates for 6 ponds	Current use by about 3,000 pelicans.
Parson's Slough (part of Elkhorn Slough)	X		Install/operate/maintain tidal flood gate. Restore existing islands/create additional islands	Use of 1/3 acre island by about 30 pelicans.
San Dieguito Lagoon	X		Install floating docks or permanent pilings	No current use by brown pelicans. Restoration plan pending.
Bataquitos Lagoon	X		Install floating docks	Small numbers of brown pelicans current use tidal mudflats and sandbar
San Elijo Lagoon	X	X	Move and enlarge connection to ocean. Install floating docks	Current use uncertain.
Ocean Waters – Southern California Coast	X		Place and anchor barge(s)	No estimate of current use of similar structures

Source: Glenn Black, California Department of Fish and Game.

Attachment C

YUMA CLAPPER RAIL SURVEY PROTOCOL JANUARY 2000

These instructions are for the official surveys for Yuma clapper rail (*Rallus longirostris yumanensis*) which are used to provide information on population trends of this endangered species. Significant changes have been made from earlier survey protocols and these instructions require the use of the new survey tape. These instructions will be in place for the 2000-2004 survey seasons, after which the Fish and Wildlife Service will review them in concert with the Yuma Clapper Rail Recovery Team. If there are questions about this survey protocol, or to obtain cassette tapes for use in the survey, please contact the Arizona Ecological Services Office at the address at the end of this document.

1. Please review the list of official survey locations on pages 3 and 4. If your agency will be unable to survey any or all of the assigned locations, please contact the AESO as soon as possible so we can try and find volunteers to survey the location.
2. Before any survey for the Yuma clapper rail, review the training tape and the survey tape to become familiar with the various calls. The tapes repeat various "clatter" and "kek" calls and are 60 minutes long. This will allow you to complete several stops before having to rewind. Also, make sure your tape recorder and speaker produce good quality sound at 80 decibels, measured one meter from the speaker.
3. Use 1:24000 USGS topographic maps for base maps. Sections of the map should be enlarged to show the survey location and route. Before beginning the survey, review maps of past surveys. Note especially the placement of "stops" from previous years. The same stops should be used, maintaining the same number. Any new stops added should have a unique number and be recorded on the map. GPS may be used to more carefully delineate stop locations.
4. All official surveys must be conducted between March 15 and May 15. The survey protocol calls for 2 surveys of each location or route per year. A third survey can be added if time and staff resources permit. There is a minimum of one week between surveys. Surveys should be conducted on the same routes used in previous years. Survey stops should be at 150-200 meter intervals unless local conditions warrant a different distance. Make sure the route and all stops are clearly recorded on the survey map.
5. Arrive at the survey location to begin surveying about 30 minutes before sunrise. Surveys should continue no later than 3 hours after sunrise. No evening surveys should be conducted for the official survey.
6. Upon reaching the location, fill in the weather information section of the cover sheet. If the wind speed is greater than 10 mph (a breeze that keeps leaves and small twigs in constant motion or extends a light flag), do not conduct official surveys. Responses to the calls are difficult to hear over the rustling of marsh vegetation.

7. For the survey, get as close to the marsh vegetation as possible at each stop. Note the time in the "time start" column. Wait quietly for one minute to listen for rails. Then play the tape, directing the speaker toward the marsh and at approximately 80 decibels volume. At each stop, play the tape for 2 minutes, turn it off for 2 minutes, turn it on for 2 minutes and turn it off then listen for one minute (total survey time 7 minutes). Keep to the 2 minute intervals as carefully as possible. Listen for rail responses during the entire period and record responses on the data sheet.
8. Record responses from each rail on a different line. If you do see/hear a pair, record the individuals separately and check the "was rail paired" column. All rails seen or heard at stops during the survey are to be counted. If you hear the same rail twice, only count it as one bird. Rails heard or seen at other times while on site during the survey are incidental and are recorded at the bottom of the data sheet. Since some observers are interested in other species, there is a column to record other species of birds observed during the survey on the data sheet.
9. After the survey has been completed, record on the cover sheet any events or disturbances that may have affected the survey results (other loud birds, boat or vehicle noise, etc.). Also, record the weather conditions. Make any other notes of observations of other species (as appropriate).
10. Please make sure the cover and data sheets are clearly filled out. The information can be used to define rails/station (all rails seen/heard), rails/stop (rails seen/heard at each stop or an average) and rails/hour (each stop has 7 minutes of survey time) after the surveys have been completed. The official survey will continue to look at rails per station.
11. Completed reports are due to AESO by July 1 of the survey year. Reports will include cover and data sheets and a map showing the survey route. Send completed survey forms and maps to:

Yuma Clapper Rail Coordinator
USFWS-AESO
2321 W. Royal Palm Rd. Suite 103
Phoenix, Arizona 85021
602/640-2720 FAX 602/640-2730

Attachment D

CHRONOLOGY OF THE IMPERIAL IRRIGATION DISTRICT WATER TRANSFER AND ENDANGERED SPECIES ACT COMPLIANCE

The Agreement between Imperial Irrigation District (IID) and San Diego County Water Authority (SDCWA) for the transfer of up to 300,000 acre-feet of water per year was signed by those agencies in **April of 1998**.

The Fish and Wildlife Service (Service) initially met with the Bureau of Reclamation (Bureau), IID and SDCWA to discuss the transfer on **January 6, 1999**. This initial meeting was the introduction to the proposed project for the Service.

A second meeting occurred on **February 19, 1999**, which focused on the issues of Endangered Species Act (ESA) compliance through section 7 versus section 10, direct and indirect impacts in the Imperial Valley and San Diego County, and the California 4.4 Plan. The assurances associated with section 10 were important to IID given the term of the agreement (45 years with an option to extend another 30 years) and the potential need for participants to secure loans.

The Notice of Preparation (NOP)/Notice of Intent (NOI) to prepare an Environmental Impact Report(EIR)/ Environmental Impact Statement (EIS) on the water transfer project was published **September 24, 1999**.

Staff from the Service attended the **October 19, 1999** scoping meeting, one of a series of meetings conducted during the comment period on the NOP/NOI.

On **December 7, 1999**, the Service began regular meetings with the Bureau, IID and SDCWA to begin the development of the Habitat Conservation Plan (HCP) to address all impacts within the Imperial Valley, the Salton Sea, and along the All-American Canal. The lower Colorado River species were also discussed. This first meeting was somewhat organizational; it focused on the roles and responsibilities, schedule, scope, coordination, and the status of the Salton Sea Restoration Project and Lower Colorado River Multi-Species Conservation Plan. A brief presentation was provided on the San Diego County Water Authority's receiving area and the potential for impacts there.

The second regular meeting on **February 3, 2000** centered on the ESA compliance approach for the transfer project and how that tied in with the Lower Colorado River Multi-Species Conservation Plan. The Quantification Agreement and its compliance schedule was also discussed. An outline of the HCP and an initial species list were also provided at that meeting. **This initial list included 21 species.** The consultant (CH2MHill) walked the group through how their process of elimination was conducted to get down to that list.

The **March 8, 2000** meeting included discussions of the HCP National Environmental Policy Act (NEPA) requirements as compared to the requirements of the project overall and how a single

document could address both. The Bureau of Reclamation agreed to send a letter inviting the Service to be a cooperating agency on the EIS so this need can be met. A supplemental NOI will be required prior to releasing the draft document to inform the public that this is the approach being taken. The major tasks required in completing the process were laid out. New maps supported a discussion of the regional setting and HCP area. Indirect effects in receiving areas were discussed, and SDCWA stated that Metropolitan Water District (MWD) would be providing a white paper on the issue March 13. The final discussion of the meeting centered on the covered species list. This meeting, in combination with a follow up conference call on March 9, resulted in further refinement of the covered species list. **At that point seven species were definitely on the covered species list, 12 were still being considered, and two species were to be dropped from the list.**

On March 27, 2000, the Service received a call from IID's consultant informing us the IID wanted to keep all of the potentially sensitive species that had been identified within the HCP project area. They were in the process of weighing the costs of coverage versus the risks of no coverage for each species. At that time they were developing the covered activities list, firming up the project area boundary, and beginning their evaluations of potential impacts and mitigation measures.

The meeting on April 12, 2000 included a review of the HCP area which includes the IID service area and the All-American Canal corridor. The 100 year flood plain of the Colorado River was excluded because it was covered in the Lower Colorado River Multiple Species Conservation Plan. The canal lining is covered under a separate consultation, but this coverage would include operational and maintenance activities. The covered activities list (attached) was provided to the group (this included 18 general activities grouped into four categories). This covered essentially all IID activities. We discussed the third party activities and the need to limit that to water conveyance/conservation activities. **A revised species list was provided which included 60 species (10 federally listed or proposed).** The Service raised concerns that such an extensive list would be difficult to address in the given time frame. IID's concerns focused on their 75 year commitment with the water transfer and the resulting broad coverage that their commitment requires. The group was also presented with the conceptual approach for mitigation in the HCP. The primary mitigation suggested was wetland creation that will address the broadest suite of species. The basic concept is to measure mitigation by area rather than number of individuals of the species to be addressed. IID has not provided a detailed proposal of how they will address the temporal loss of habitat in the Salton Sea that will occur with the project. These changes are expected to be significant, however, based on the model prepared by the Bureau of Reclamation for the Salton Sea Restoration Project. Under current inflow conditions, the Salton Sea's salinity in the year 2030 is expected to be on the order of 53,000 mg/L. Under the reduced inflow, the salinity in 2030 is expected to be approximately 75,000 mg/L. Elevation is also expected to differ. The Sea's elevation under current inflows is expected to be approximately -224 feet mean sea level in 2030. Under reduced inflows, the elevation is expected to be approximately -234 feet mean sea level. The change in salinity is expected to result in changes in the Salton Sea's fauna (including the loss of the fishery that currently supports fish-eating birds) on a much more

accelerated rate as compared to the current inflow conditions. The final action item to come out of the meeting was that a draft NOI would be prepared by Washington, DC and California Solicitors' Office staffs.

The meeting on **May 10, 2000**, began with a discussion of the area to be discussed in the EIR/EIS versus the HCP. The EIR/EIS will cover the area to the edge of the 100 year flood plain (the edge of the Lower Colorado River Multiple Species Conservation Plan area). The HCP, on the other hand, will extend up into the flood plain to the discharge from the desilting basins to cover IID operational and maintenance activities in the area. The Lower Colorado River Multiple Species Conservation Plan and EIS will cover the federal action (i.e., change in point of diversion) within this area. This change in coverage area will require the additional coverage of lower Colorado River species. Tables were sent to the group in advance of the meeting (received May 5 via e-mail) that included a preliminary evaluation of the potential impacts to covered species and possible mitigation to address those impacts. These were very conceptual and needed to be related to specific covered activities. The difficulties of dealing with species with little site specific information were discussed, and an adaptive management approach was suggested by the consultant. We discussed the difficulties of evaluating the potential for jeopardy and developing terms and conditions in these circumstances. The Service offered the option of a phased approach to the HCP to allow for coverage of the listed species and any other "high risk" species in the current time frame and addition of species through amendments. IID reiterated concerns associated with their long term commitment. More detailed species accounts, more detailed activities descriptions, and a framework for the HCP were the next items to be distributed to the group.

On **May 12, 2000**, the Service submitted our acceptance of the cooperating agency designation to the Bureau of Reclamation.

An initial set of species descriptions (incomplete) was provided in advance (e-mail sent June 7) of the **June 14, 2000**. That meeting began with a presentation by IID staff on the hydrological model that is being developed for the Imperial Valley. The model will be used to predict the outcomes of a variety of possible conservation scenarios which will then be evaluated for species impacts. It will also serve as a means to determine compliance with IID's 3.1 million acre-foot/year cap included in the Quantification Settlement Agreement (QSA). The appropriate scale for evaluation of the model output/impacts was determined to be on the basis of "drainsheds" rather than individual drains or valley-wide. The discussion turned to the issue of additional coverage within the flood plain of the Colorado River and why that was needed. It relates back to the length of IID's commitment and the desire to have assurances associated with all HCP species coverage. **This coverage necessitates the addition of 29 species to the covered species list (two federally listed)**. This complicates further the task of completing the HCP within the needed time frame. The NOI will have to address these species as well.

At the **July 24, 2000** meeting the Service was presented with an expanded description of the proposed covered activities and a draft document describing the conceptual approach for the

Multi-Species Conservation Plan. The packet included an analysis of effects of the covered activities for the first of the eight species groupings being proposed. There was preliminary agreement that the overall approach was a useful organizational tool, but it was pointed out that we can't lose sight of individual species' needs in the process. A formal presentation was made of the categories of mitigation that IID is proposing to address impacts to the covered species which have now been grouped based on habitat use. Deep water ponds, managed marsh, and "on-channel" ponds were identified as the primary types of created habitats they are considering. The scale of individual sites was provided, but no quantification of the valley-wide needs had been developed. The California Department of Fish and Game raised concerns about the impacts to the sport fishery and the need to address that in the EIR/EIS. The Service agreed to provide additional comments on the documents received at this meeting, the documents to arrive shortly, and the species accounts at or before the next scheduled meeting.

On August 1, 2000, the Service received the analysis of effects of the covered activities for the remaining seven of the eight species groupings being proposed in the HCP approach and a tabular matrix of the effects of the covered activities by species groups and subgroups from IID's consultant.

The Service's draft comments on the following documents were distributed at the beginning of the August 9, 2000 conference call: the covered activities descriptions, the HCP approach document including all species groupings, the effects matrix, and the species descriptions provided to the Service to date. The conference call began with a walk through of the major comments on each of those documents. All individual comments could not be addressed, but the Service offered to provide additional information/clarification as needed. Major comments included the need for greater clarification to connect the individual covered activities included with the requirements of the water transfer/quantification cap. **The need to address the QSA cap was stressed by IID as a new aspect of the scope of the HCP.** The use of a habitat based approach does make evaluation for the internal section 7 on permit issuance and the permitting process in general more difficult. The permit still has to be done in the context of each species' status. The next steps involve quantifying the impacts and determining the extent of the required mitigation. It was agreed that the marsh group and the desert pupfish would be the first to undergo this analysis. It was reiterated that the analysis can be conducted by group, but we must be able to be sure that our approach is adequate on an individual species basis. The species accounts provided require additional detail on project area habitat and project area occurrence in order to accomplish this task. The Service offered to provide copies of examples that have been appropriate in other HCP's. The discussion then focused on system versus on-farm water conservation measures and the potential role of fallowing. The model being developed should allow the potential extremes and the likely impacts to be identified so that the mitigation can be appropriately scaled. The consultant's intention is to look at most likely impacts, but they will also look at contingencies to address the worst case scenario. **Final concerns were that the NOI needs to be published as soon as possible, and the Service will need time to review the EIS before it is published (the current schedule calls for publication in September) given it has to address our NEPA**

requirements as well. The September meeting was canceled as a result of several schedule conflicts.

On August 15, 2000, the Service requested an update on the schedule for the EIS and the HCP. As of August 29, 2000, no updated schedule could be provided.

On September 13, 2000, the Service received notification from IID that they would not be able to meet the January 19, 2001 target date set by the Secretary of the Interior. At that time we were informed that the internal review draft of the EIR/EIS should be ready in the first part of November along with a first draft of the HCP. IID indicated that they should be ready to submit the HCP to the resource agencies by the end of November or first of December. They suggested a tour of possible mitigation sites at that point because they would have a better understanding of what they would be proposing. This was tentatively scheduled for late October/early November. The model peer review team was being set up and their meeting schedule was to be determined at a meeting on September 18. The Service nominated Tim Mayer from the Regional Office. We were informed at that time that the IID would not require any further meetings with the resource agencies until the submittal of their HCP.

On October 27, 2000, we were informed by Bruce Ellis of the Bureau of Reclamation that they had a meeting scheduled with IID to exchange draft documents. The Bureau was to share a copy of their programmatic Environmental Assessment on the Secretarial Implementation Agreements and IID was to have the Draft EIR/EIS for the transfer for the Bureau. Carol Roberts contacted Steve Knell on October 31 to see if it would be possible for the Service to be represented at that meeting as a cooperator on the EIS. She was informed that the meeting was for the lead agencies only. A separate e-mail was also received on that date indicating that the model presentation was going to be delayed as a result of the need to complete the HCP and EIR/EIS documents. Bruce Ellis informed Carol Roberts on November 13 that the Bureau had not yet received a draft of the transfer EIR/EIS as IID had concluded that they needed to complete the HCP first. They were focusing their efforts on completion of that document first so that it could be addressed appropriately in the EIR/EIS.

On November 6, 2000, an amended Notice of Intent was published by the Bureau in the Federal Register to address coverage of permit issuance in the draft EIR/EIS. A thirty day comment period followed during which the Service received three comment letters. Two raised concerns about the indirect effects in the receiving areas, and the third requested that tribal trust resources be addressed in the document.

The tour of the Imperial Valley occurred on December 1, 2000, with Carol Roberts and Nancy Gilbert attending for the Service. Also in attendance were Kim Nicol, Teresa Newkirk, and Sharon Keeney from the California Department of Fish and Game. The focus of the tour was the nature of IID operations around the valley with stops to observe things like surface and subsurface drain operations, drain maintenance, dikes along the south end of the Salton Sea, and

lateral interceptors/reservoirs constructed as part of the previous transfer to MWD. A stop was made at the Imperial site of the Brawley Wetlands project to show one type of habitat that could be created. There was also a stop at one of the local duck clubs receiving drain water. The group discussed possible measures to avoid impacts to burrowing owls using drains or canals. No specific mitigation sites were identified, but the plan will mitigate for losses of habitat resulting from drain maintenance and degradation of water quality. The consultant also identified tamarisk stands around the Salton Sea shoreline as likely to be lost as the Sea recedes. These will be mitigated with plantings of native cottonwoods, willows and mesquite trees. **At the conclusion of the tour, the Service was informed that the draft HCP should be available sometime between December 18, 2000 and the first week of January 2001.**

On **January 2, 2001**, the Imperial Valley Press ran a story on the water transfer that stated that the IID would begin their negotiations with the Service by **January 15th**. In response the Service requested an update on the schedule on **January 9, 2001** via e-mail. The response received from IID on **January 13th** was that they were in the process of coordinating with the other parties to the QSA (Coachella Valley Water District (CVWD) and MWD), and IID was hopeful that the coordination would be completed shortly. They provided **late February** as the soonest the HCP would be submitted to the Service.

On **January 12, 2001**, the Service's Phoenix Fish and Wildlife Office issued their biological opinion to the Bureau on the Interim Surplus Criteria and the Secretarial Implementation Agreements. This document provides incidental take to the Bureau for their actions on the lower Colorado River that are required to implement the water transfer as part of the California 4.4 Plan. Indirect effects of the transfer in receiving areas were discussed in the document. Incidental take has already been provided in some areas through regional HCPs. Incidental take in areas not covered by regional HCPs was deferred to coverage as future projects are developed.

On **March 5, 2001**, a meeting was held at the California-Nevada Operations Office (CNO) to discuss the IID HCP. The meeting was called by the Bureau's Regional Director for the Lower Colorado River Region. In attendance were: the CNO, Carlsbad Fish and Wildlife Office, and the Sonny Bono Salton Sea National Wildlife Refuge (NWR) for the Service; the Bureau's Lower Colorado River Regional Office; IID, their attorney and CH2MHill; CVWD; MWD; SDCWA; and the California Department of Water Resources. The importance of completing this permitting process in a timely fashion was stressed by all the water agencies present. This water transfer project is considered to be the key to the California 4.4 Plan. A presentation was provided that gave an overview of the project and the HCP that is being developed. The HCP is a habitat-based HCP. The Service pointed out that the HCP will still need to assure that all individual species are adequately addressed if they are to be covered by the permit. The covered activities are to include only those associated with water use activities. General farming activities are no longer included. A list of the habitats to be addressed was provided along with basic information regarding the mitigation. The IID emphasized that the Salton Sea was undergoing changes and that they believe that the transfer project is not responsible for restoration of the Salton Sea. They support restoration, and will contribute towards the efforts, but in the absence of a larger restoration effort

they will implement enhancements in areas focused around the river deltas only. Off-site enhancements for piscivorous birds will also be considered. State and Federal support will be sought to assist with the implementation of these efforts. No alternatives that result in reductions in crop yields (i.e., no fallowing) are to be included in the alternatives as this is deemed unacceptable politically.

The schedule for the project was provided by IID as follows:

March 20, 2001 - draft HCP is provided to the Service and the California Department of Fish and Game (CDFG)

HCP negotiations to be complete in **30-45 days** (if possible)

Draft EIR/EIS in **late June or early July, 2001** (impacts of permit issuance are to be addressed to meet the Service's NEPA requirements)

Final EIR/EIS around **Thanksgiving 2001**

Permit Issuance in 2002 (by January if possible, but at least in time for farmers to sign up for the water conservation program before the summer irrigation season)

Water flowing to SDCWA in 2002.

All agreed that this was a very ambitious schedule.

On **March 20, 2001**, we met in Carlsbad with the IID HCP team. Copies of the document had been provided to the Service and CDFG one week prior to the meeting. IID provided a computer presentation on the basics of the HCP approach. This HCP is intended to address not only the IID-SDCWA conservation and transfer project, but the QSA cap as well. It is a habitat-based approach with the goal of maintaining habitat quantity and quality. Salton Sea restoration is considered an independent activity. IID is offering some "stand-alone" projects to address impacts to Salton Sea species should the larger restoration effort not move forward. Tamarisk scrub issues are tied into what occurs at the Salton Sea because most of this habitat is in shoreline areas. The drain and desert habitats as well as the individual species to be addressed were also discussed. CDFG raised concerns over the use of the 2081 permit to cover unlisted species. IID stated that they were assured from the highest levels in the agency that this need could be accommodated. The Service again raised the concern that there is not adequate time to maintain the current covered species list, and we recommended that our efforts be focused on those species for which there is adequate information to issue a permit. IID countered that their Board is not willing to take on the risk of a new species listing after the project begins. They expressed the desire to work through the individual categories to see if the issues can be resolved before making any decisions on dropping species from the list. We discussed the "flagship species" such as the burrowing owl and the desert pupfish and how outside expertise may be needed to address these species. We briefly discussed the agricultural field species and the lack of mitigation for these species. IID stated that they felt that adequate mitigation was provided by the fact that the transfer project would allow agriculture to continue in the Imperial Valley indefinitely thus providing long-term habitat. Without the transfer, the longevity of agriculture in the valley could not be assured. Lastly, we discussed the monitoring and adaptive management approach. Currently, the program is not adequate to provide for an adaptive management scheme and to support permitting. The frequency of surveys and the specificity of optional management actions

will have to be improved greatly before permitting will be possible. We scheduled the topic for the next meeting (drain habitat) and adjourned.

The group met again on April 2-3, 2001. We started the discussion with an evaluation of the representativeness of the drains studied in the Hurlbert (1997) study. These drains were chosen for other purposes, so we were looking for some verification that they represent the range of drain types occurring in the Imperial Valley. Seven characteristics were identified to be considered in a statistical evaluation of the drains: total dissolved solids, water slope, side slope, main vs. lateral drain, flow (where available), date of last cleaning (of the Hurlbert drains), and water use history. If these drains are reasonably representative, we will use the vegetation analysis in the Hurlbert study. If not, additional surveys in the future would be needed to determine the actual amount of mitigation that is needed for drain related activities. We also discussed the 14' width and determined that its use was acceptable. However, additional diagrams and information will be added to the document to support its use.

Operations and maintenance topics were discussed. Much more specificity is needed in these discussions to provide some cap on the amount of take that would be associated with these activities. Herbicide use is problematic, and the Service will pursue the best means of addressing this issue in the permit (if it is possible). Nothing in the plan addresses habitat loss associated with the change in land use on leased lands. IID is concerned about taking on responsibility for the actions of lessees, but the Service sees this as a potentially significant unmitigated impact. Further discussion will be required on this issue. Construction projects were also too open-ended in regards to take. The contractor agreed to try to re-work this section to make it more clear what the nature of the construction projects will be and what categories they envision as requiring some mitigation. Again, some kind of cap is needed on the potential take. The rails and the least bitterns are driving the mitigation in this group. It was decided that this may not adequately address some of the other species. Also, there seem to be opportunities for avoidance that were not being incorporated into the plan. IID will look at worker education and leaving some vegetation standing when dredging drains as possible avoidance measures. Frogs may receive special mitigation including re-introduction so that a demonstrable benefit could be assured. Some species were moved to other groups. The transients are problematic because it is difficult to establish the take and the benefits of mitigation. Rob Thornton will be providing examples of how these species were addressed in other HCPs. Adjacent wetlands were discussed along with how the monitoring and replacement of these wetlands could be improved, including a focus on maintaining rather than replacing. We concluded with identifying the action items and the topics for the next meeting (pupfish, agriculture related species, and desert species).

On April 11 and 12, 2001, we met to discuss the desert pupfish, desert issues and agriculture related issues. We started with a couple of items carried over from the last meeting. Jim Setmire of the U.S. Geological Survey was contacted for additional information on the choice of drains in the Drain Report. He identified flow, soil type and selenium concentrations as the factors he evaluated in choosing drains. He attempted to represent the range of those characteristics in the study. This information was helpful, but the evaluation discussed at the last meeting would

provide a more thorough documentation of the representativeness of the "Hurlbert" drains. Pesticide coverage was strongly discouraged by the Service's Regional Office given the complexity of the impacts and gaps in data to evaluate impacts. The issue is still open, but coverage would have to be based on use of a very limited range of chemicals, and the analysis would have to address the range of potential impacts that could occur in the species potentially exposed. This would be a significant workload issue for the Service.

The desert pupfish was discussed in order of the items in the conservation program. The first issue of concern was limiting the number of drains considered based on the ability to pick this species up in a survey in the last 5 years. Given the sporadic appearance of this species in some of the drains, this approach was not acceptable. A more justifiable approach is to consider all drains that flow directly into the Sea to be habitat and gear the conservation program accordingly. Avoidance and minimization measures to be carried out as part of the maintenance of these drains need to be incorporated into the program. Maintenance dredging will be conducted at most once per year on the center of the drain leaving the edge vegetation in tact. If that is not feasible due to the width of the drain, only one half of the drain will be dredged in any one year. The appropriate approach needs to be determined in advance and incorporated into the worker education program. The maintenance will also be done in a downstream direction. Exceptions will be identified in advance, and other means will be considered to avoid impacts associated with moving in an upstream direction. The test channel concepts offers some viable opportunities for studying management options. However, the proposal may require a longer time frame to see results, may require more active management to achieve colonization, and may require additional funds to complete these efforts. CH2MHill will try to provide greater detail in regards to what is planned. Time frame is important as we will want access to the information generated before we are too far into the permit period. We also identified the need for a formal concurrence process between IID and the agencies before changes to the program are implemented. We also discussed the possible problems associated with Salton Sea elevation decreases and the possible need to contour channels or recreate shoreline pools. Water quality is a problematic issue given that we currently have no framework for determining the amount of mitigation that is needed. Three constructed channels with operational discharges were offered as a starting point, but we need a better understanding of the impacts to know if this is adequate. CH2MHill will provide model outputs for these drains for evaluation. Other mitigation sites could be used for re-introduction of pupfish to help offset habitat impacts in the drains. For construction projects the goal is one of no net loss. An accounting system will have to be laid out in the HCP with a ledger for potential habitat gains (possibly as a result of lengthening of the drains with drops in Sea elevation) and losses. The last topic we discussed was the possibility that the Salton Sea may become inhospitable to pupfish sooner as a result of the project than would otherwise occur and that this would need to be addressed in the absence of a larger restoration project.

The discussion of desert habitat started with a request to better represent the area being discussed including discussion of the desert interfaces along the East Highline and Westside Main canals (in addition to the All-American Canal). We need some contingencies for emergency repairs to be incorporated into the HCP given that earthquakes, tropical storms, and other natural events are

likely within the life of the permit. We need to incorporate the basics of the worker education program into the HCP, although the specific locations will not be available until surveys are completed. Plant surveys should be conducted when the appropriate meteorological conditions occur rather than on a set schedule. CDFG will develop triggers for initiation of the surveys. Baseline will require a minimum of 2 years of surveys in the right conditions. CDFG stated that they do not conduct salvage and do not consider salvage to be mitigation for covered plant species losses. Permanent preservation will be required. Weed invasion will also have to be evaluated based on current conditions and monitored in the future. Animal surveys will also need to be modified to incorporate a meteorological component. Surveys should be conducted in a stratified random fashion focused on the appropriate habitat for each species. A variety of survey methods will need to be incorporated to pick up the entire suite of species. The list of desert animal species should also include the burrowing owl. The conservation program also needs to include all of the standard avoidance/minimization procedures for the desert species. The agencies will provide a list to CH2MHill. Again, there will need to be a process for reaching agreement on modifications to the program, and a mechanism to deal with cases in which the agencies and the applicant cannot agree. Additional language will be provided to support this need. When preservation is required to mitigate impacts, this must include adequate funding to provide for the management of those lands in perpetuity. IID has the option of purchasing the lands and managing them, or turning them over to land management entity with an endowment to provide funding for management. IID also has the option to restore temporary impacts (to be initiated within 12 months), or to mitigate those losses as permanent.

The agricultural land habitat does not include coverage for farmers' general activities. IID feels that crop changes in response to the need for water conservation are unlikely as these changes are likely to remain market driven. IID is also not planning to pay farmers to fallow their land, so impacts from this should not be considered part of the project. However, they are looking for coverage of fallowing on their lands, and they are evaluating fallowing as a means of water conservation in the EIS/EIR. IID decided that further internal discussion was necessary as they may want to cover fallowing in general. Whether or not fallowing or crop changes are subsidized as part of the program, they do appear to be a possible outcome of the conservation program/cap during the life of the program and should be considered. We need to have more detailed information on all the activities to be covered and how these may impact the covered species.

The last topic discussed was the razorback sucker. IID is relying on the operations biological opinion for coverage of entrainment in the short-term, and the Multi-Species Conservation Plan will provide coverage in the long-term. The MSCP approach is to develop enough habitat that fish reproduction will be adequate to support losses to dams or entrainment. They water agencies do not want to maintain screens. Although the impression was that fish found in the canals were already considered to be "taken", a review of the biological opinion revealed that the incidental take statement specifically excludes live fish from the take. These fish are to be dealt with via a protocol to be defined by the Service. The CDFG has a protocol that has been used in the past. This species is fully protected by the State, and cannot be taken. This will need to be resolved.

On April 20, 2001, IID provided a presentation on their hydrological model for the Imperial Valley. The Colorado River model produced by the Bureau of Reclamation provides the input, and the output of this model can be entered into the Bureau's model for the Salton Sea. All water entering the system leaves through one of the outputs identified by the model. The focus is on consumptive use versus what flows into the drains, rivers and the Salton Sea. IID has very good data on which to model deliveries. Measurements have been made at all delivery points. The drains are not as well understood because there are only a few points that have had any measurements over time. The focus of the model design was the period from 1987 to 1998 as detailed data was available for water use and cropping patterns. Based on testing against historical data, the model predicts total flows to the Salton Sea, flows to the New River and flows to the Alamo River well. Flows in the drains that flow directly into the Sea are not captured as well in the model. Future cropping patterns are assumed to be similar to today. Water conservation is assumed to be achieved by physical means that do not include fallowing or crop changes. The average performance improvement in water conservation was 30%. The on-farm conservation drives the model. However, system changes do tend to have a greater effect on concentrations of individual constituents (e.g., selenium). The model has incorporated parameters to address changes in total dissolved solids, selenium, and boron along with some constituents that are (or were) applied on the farms (DDTs, toxaphene, chlorpyrifos, nitrogen and phosphorus). The model did not identify a relationship between soil type and concentration of the modeled constituents. What was found was a relationship (inverse) between flows and concentrations of trace elements. The model is based on mean concentrations. Although this was not deemed to be an issue for selenium, it could be a concern for chlorpyrifos and nitrogen (specifically that in the form of unionized ammonia). IID felt that applications of pesticides and fertilizers are likely to go down with water conservation. Overall, the presentation was very helpful.

The meeting on April 27, 2001, was focused on the drain water quality and the approach taken to develop mitigation. We started the meeting by reviewing the assignments still pending in the HCP revision. Many issues remain to be resolved in terms of the role of fallowing and what will be addressed as unforeseen circumstances. In order to facilitate the discussion of water quality, Harry Ohlendorf of CH2M Hill and Joe Skorupa of the Sacramento Fish and Wildlife Office participated in person and by phone, respectively. Joe had several questions which we discussed in the order that they were presented in the document. The major concerns he raised were:

- The use of 5 µg/L Se or the concentration in the incoming water, whichever is greater as a criterion for the water quality in the created marshes presents two major problems. The level of 5 µg/L Se may not be adequately protective of wildlife and is being evaluated by the Environmental Protection Agency. This concentration as a water quality criterion in the California Toxics Rule constituted a jeopardy for the California clapper rail. Similar concerns exist for the Yuma clapper rail. The other concern is that this does not present an upper limit on the Se concentration. IID was concerned that they might be limited in terms of the concentration of the incoming water from the Colorado River. While this concern is justified, it does not change the fact that we need to be able to analyze the

impacts of the HCP and determine if mitigation is adequate. This cannot be done if water of adequate quality cannot be assured for mitigation habitat. A concentration of 5 µg/L Se is only acceptable with substantial monitoring for wildlife impacts. A concentration of 2 µg/L Se is preferable. Given the scale of the mitigation, pre-treatment to this level should be feasible. IID was concerned about making a commitment to treating to this concentration given that the concentrations in the Colorado River could not be assured.

- Impacts other than hatchability have not been addressed. Other things that should be considered are post-hatch effects, immune suppression, and body condition.
- The applicability of the formula to this situation needs to consider that the relationship was developed for ponds which had reached an Se equilibrium and were very stable in terms of Se concentrations. Although this is probably the best basis we have, the conditions in the valley are going to be much more variable. If the invertebrate concentrations in relation to the water concentrations are similar to those found in the ponds where this was developed, it is reasonable to use this approach in the Imperial Valley.
- Because this relationship was developed for stilts, it may not be appropriate for the covered/listed species if they are more sensitive. It would be prudent to look at the relative sensitivities of different species provided in the literature to determine if a safety factor is needed.
- The use of a percentage of habitat for mitigation may not adequately address potential accumulative effects (i.e., it assumes zero additive effects over time). Specifically, the demographic assimilative capacity of the population has to be able to tolerate this potential loss over the term of the permit. The most protective approach is to mitigate 100% where there is an impact, thus addressing the entire drain population. An alternative is the use of a safety factor and include a higher acreage of mitigation. This could be scaled back if monitoring indicates that less is required to achieve the same goal. Otherwise, a mechanism is needed to add to the mitigation if the monitoring indicates such additive effects may be occurring.
- It is not clear what opportunities we have to promote recovery within the HCP. For some species we are dealing with a significant portion of the range, and this is an important consideration. The HCP should not preclude and should contribute to recovery. IID does not feel that they have a responsibility to recover species, but they acknowledged that the wording in the document could be improved.
- A basis for the acceptable numbers being within 25% of the baseline surveys should be provided.
- Overall, Joe recommended taking a conservative approach and designing mitigation around the worst case. This is the best way to determine long-term costs up front. IID was concerned that the use of worst case, while providing for a maximum long-term budget, would ultimately be a deal breaker as the costs would run too high. Given that the chance of needing additions in mitigation above the current planning for most likely impacts is high (Joe estimated 50% relative to the contaminants impacts), the current burden on the Service for addressing those changes appears to be too high.

Some additional comments were provided by the Service including the fact that covered species use of open water in the drains was not addressed. Also, the language discussing the mitigation ratio is inappropriate given that we are using a probabilistic multiplier. CH2MHill agreed to reconsider that language. We scheduled the topics for our next meeting and adjourned.

On May 8, 2001, the group re-convened to discuss issues related to burrowing owls and bats. CDFG was concerned that the proposed strategy does not incorporate their protocol for addressing burrowing owls. Strategy Owl-2 was of particular concern because of the reliance on the operators for locating burrows. There are several specific requirements of their protocol that IID felt would impact their ability to maintain their operations. CDFG will confer internally to see what flexibility they have to deviate from the protocol in an approved HCP. IID emphasized that they must be able to address drain flow problems, although they do have some flexibility to modify their techniques to minimize the likelihood of impacts to owl burrows. This is important given that they are moving in a direction of only doing maintenance where there is a specific request to do so to minimize impacts of the cleaning operations valley-wide. The Service recommended that they consider addressing the two groups of owls that are present in the Imperial Valley. There are breeding birds for which protection of the occupied burrow complex is paramount, and there is an influx of birds during the winter whose use of burrows is more variable providing greater flexibility. "Fallback" of dredged material into the burrows was identified as the most likely impact. IID felt that this could be avoided by having excavator operators modify their movement patterns around burrows. A worker education program would be needed to implement this aspect of the HCP. The approach that was recommended is to have a full time biological monitor that will be charged with conducting breeding season surveys that will be focused on areas IID expects to be cleaning that year. The monitor would survey and mark burrows so that they can be avoided by operators. IID offered to have operators drive by the drain to be cleaned on the side opposite of the equipment movement path to maximize the chance of identifying burrows that need avoiding. The Service recommended providing burrows the maximum buffer allowed by the equipment. All agreed that we would like to maximize avoidance of burrow impacts, but we are looking to ultimately sustain a population of burrowing owls in the Imperial Valley. This will require an adequate level of monitoring including surveys and banding to obtain a better understanding of how burrowing owls use the Imperial Valley. In addition, we need to lay out adaptive management options as part of the HCP to address any shortfalls in the proposed strategy. Possibilities include the addition of artificial burrows in areas where these may be limiting, a change in maintenance practices, or changes in land use on IID land to promote burrowing owls. Additional aspects that IID needs to consider include: canal maintenance can also impact owls and needs to be addressed, a farmer education program may provide benefits to the owls in areas that are outside their jurisdiction, and they need to consider the owl's generation time when developing the monitoring program (it takes 6 years to get to a sample size of 1 in terms of the population). In addressing the construction impacts, a 2:1 ratio of replacing each impacted burrow (or 5:1 or greater on a per pair basis) was deemed acceptable. The potential impacts of these projects needs to be quantified (at least a cap). IID felt comfortable that construction activities could be scheduled outside the breeding season. Emergencies will be dealt with elsewhere in the plan.

Bats are very difficult to address because there is so little information. The Service is in a difficult position because we can't define what we would be permitting. IID needs to conduct the appropriate studies to lay out how the bats proposed for coverage use the HCP area, and they need to provide an evaluation of the impacts of IID's activities. This requires a better definition of the covered activities. The HCP also needs to incorporate a system of checks and balances to identify what will be done for each potential conclusion that comes out of the studies. IID needs to understand what costs are associated with this process before they are willing to approach the Board with the possibility of removing bats from the covered species list. We discussed the possibility of some sort of conditional coverage, but this has been problematic in other HCPs. It would be better to either remove them from the list or commit to the appropriate actions to justify coverage. IID should investigate if there are opportunities to include a pro-active approach whereby they would incorporate actions that would benefit the bat species within or in the vicinity of the HCP area such that a stronger argument could be made that coverage is justified. The bats also need to be addressed on a species specific basis as some species needs are different from others. The group agreed to the following approach to address bat coverage: CDFG will work with CH2MHill to identify a list of bat experts in California. CH2MHill will organize a "bat summit" at which the experts would come together to discuss the best way to address bats in the HCP. In preparation for that meeting, CH2MHill will develop a better defined list of activities that could impact bats and a list of potential interim measures that could benefit the species while a study is conducted to assess bat use of the Imperial Valley and better define the potential impacts of IID's activities. The experts would be tapped for input on the interim measures and study design to meet the needs of the HCP.

On May 14, 2001, IID hosted a tour of several drains to discuss surveying the drain system vegetation. CH2MHill decided to complete a survey rather than taking the time to further evaluate the "Hurlbert drains" when the outcome was likely to indicate they weren't representative of the drains as a whole. Staff from the Carlsbad Fish and Wildlife Office, the Sonny Bono Salton Sea National Wildlife Refuge and the CDFG were in attendance. CH2MHill is committed to surveying all 1,400+ miles of maintained drains. This will include spillways that are maintained for storm run-off as well as the irrigation drains. Some areas that function to allow drain water to pass through them but are not maintained will not be surveyed. However, these areas should be discussed in terms of what emergency actions may be required in these areas, what impacts could result, and how these impacts will be addressed. The surveys will be conducted by segments as determined by the lay out of the drain. Within each segment the width of the vegetated portion will be estimated less the open water. If there is an obvious demarcation or difference in vegetation between the wetted portion of the drains and the banks, these will be totaled separately. The California Native Plant Society relative abundance categories will be used, and an effort will be made to have totals add up to 100%. The following vegetation categories were identified: bare ground, herbaceous ground cover, salt cedar, cattail, bulrush, common reed, arrowweed, docket, salt bush, willow, mesquite, and sedge. The surveyors will not be looking at vegetation height. Vegetation width will be recorded as horizontal width for two reasons: to facilitate the survey process and to allow for the use of aerial photographs should some areas not be accessible. This was deemed acceptable given that the mitigation habitat will be of better

quality to offset estimates that reduce the quantity. Dead or dormant vegetation (except ground cover) will be counted and its condition noted. It was agreed that by surveying the entire drain system, all stages of maintenance should be covered.

The group had originally scheduled a meeting on June 7 and 8, 2001. This was later re-scheduled to **June 5th** to better accommodate the resource agencies' schedules, but was **cancelled by IID** on May 29th to allow CH2MHill more time to prepare document revisions. This revisions were scheduled to be provided to the Service and Fish and Game by close of business on June 1st. The **revised covered activities text was provided** by Sandy Taylor of CH2MHill **on June 4th** via electronic mail, and the **revised desert pupfish strategy was provided** by David Christophel (also of CH2MHill) **on June 13th** via electronic mail.

Our next meeting occurred on schedule on **June 15, 2001**. The agenda included a discussion of the revised covered activities, the revised desert pupfish strategy, and a review of the project status and related activities. As a result of the short review time provided, the resource agencies asked that an in-depth discussion of the desert pupfish strategy be deferred until the next meeting. We support the goal of increasing the available pupfish habitat, but the monitoring and accounting system must be of adequate detail to measure actual habitat parameters as shifts of habitat with a decline in sea level may occur. We did discuss the revised covered activities section in detail. More detail will still be needed to clarify exactly who will be covered for what activities. Because the constraints on fallowing only apply to the IID-SDCWA water transfer, IID now considers fallowing to be a viable part of the overall water conservation program. Fallowing may be used to meet the transfer of water to CVWD or MWD, or it may be required to pay back an overrun. Permanent and rotational fallowing of up to 60,000 acres may occur. The inclusion of duck club and recreational activities requires a clarification as to how this relates to water conservation. Changes in land use also needs much more specificity before the language is acceptable. Caps on the impacts associated with all activities will need to be provided in the revision of the impact analysis. We will provide information on current management for habitat areas as guidance for the development of a more specific discussion on this topic. The group acknowledged the need to lay out what will be considered a major vs. minor amendments and the process that will be required for each. This applies to many of the activities that cannot be discussed in detail at this time because of the inability to predict what new technologies may be available in the future. Experimental projects are problematic given the level of detail available at this time. We will need to evaluate what aspects can be covered by concurrence vs. those that will require an amendment to the permit. Emergency response actions also require a more detailed discussion in the document. While IID may not have a detailed response plan to form the basis of this discussion, they will provide more detailed information on the types of activities they anticipate could occur in response to the most likely emergencies (i.e., earthquakes and tropical storms and the resulting damage).

The group met again on **June 28-29, 2001**. The first item on the agenda was the revised pupfish strategy that had been carried over from the last meeting. We began with a review of photographs that had been taken of the drains that flow directly to the Salton Sea. There was

some diversity in the width and configuration of these drains that does seem to warrant including more than one approach in the avoidance and minimization procedures. It was decided that a site visit would be an appropriate forum for discussion these issues. It was also agreed that exceptions in the timing of cleaning would be limited to those required to prevent damages due to flooding. The funding provided for Pupfish Strategy 2 is being used to define a level of effort associated with this study, and we were asked to consider this a place holder at this time. A different figure may be provided in the future as we better define the exact nature of the data collection efforts. Pupfish Strategy 3 is designed to increase the available habitat for pupfish, but not to obligate the IID beyond any limits place on their activities by the Restoration Project. There is still a connectivity issue that needs to be addressed above and beyond the absolute quantity of habitat. The IID is willing to look at possible ways of connecting the individual drains separate from the Salton Sea given that salinity may at some point preclude this movement. The habitat accounting is yet to be finalized. The primary metric will be the linear distance along the drain, but factors such as flow, depth, and channel width will have to be considered in determining if all areas of these drains will be considered pupfish habitat. The ultimate measure of suitability will be the occupation by pupfish as measured in their effectiveness monitoring. There will be similar issues at the drains in the north end of the Salton Sea. IID intends to contact the Coachella Valley Water District on this issue. Water quality in these drains, particularly in regards to selenium, has yet to be resolved. We are still waiting the results of the modeling for these areas. IID decided to delete Pupfish Strategy 4, but this type of approach may need to be re-considered pending the outcome of the modeling. Should contaminant levels rise too high for pupfish reproduction, some means of excluding them from contaminated habitats may be required. There may be limitations based on the amount of canal water available in some areas. Another issue came up in this discussion, and that was the life of each strategy. Their intention is to conduct these activities for the life of the permit (not in perpetuity) given that they cannot predict whether the transfer would be renewed or cease at that point. This is very unusual, as most HCP mitigation actions are in perpetuity. Also, IID needs to consider such changed circumstances as a major cessation of farming activity in the Imperial Valley during the life of the permit. They will consider these aspects in more depth. Pupfish Strategy 5 will be modified to reflect that there will not be surveys to demonstrate absence; instead, all activities in potential habitat will include the avoidance, minimization and mitigation measures.

There were two new general commitments in the HCP introduced at this meeting. One was for a full-time HCP implementation biologist, and the other was to arrange for a technical advisory committee to be formed. Given that the membership of the committee is to include the IID, CDFG and the Service, the HCP Implementation Committee was deemed to be a better name. This leaves open the possibility that scientific experts could be brought in to provide support on specific implementation or monitoring issues.

The Burrowing Owl and Desert Strategy revisions were not received until June 26th. This did not provide the resource agencies with adequate time for a full review, so CH2MHill provided the group with an overview of these two revisions. The general comments that were offered by the agencies included the need for a cap on impacts to burrowing owls and identification of the

parameters that will be considered in developing burrow banks. CH2MHill will attempt to develop a set of guidelines that will be used to determine when burrows compromise the integrity of the canal linings. These strategies rely on the HCP biologist to develop a good sense for where owls can be found in the valley to appropriately coordinate the proposed activities. Site specific construction plans with avoidance and minimization measures for owls are to be incorporated into construction projects. **This discussion is being carried over to the next scheduled meeting on July 6, 2001.** The desert strategy was also reviewed with some specific comments being provided by the resource agencies. Not all items from the previous discussion have been incorporated into the revised text including a diagram of the right of way lay out along the canals, a quantification of the maximum impacts anticipated, a discussion of the types of emergency actions that may occur in this habitat, burrowing owls should be included among the species in this habitat so it should be clear that those strategies will apply when appropriate, and the coverage for the use of the old canal (once the new one is constructed) is not clear. There are species in the HCP that were not covered by the consultation process on the lining process, and we need better information on the activities and associated impacts before they can be covered. Also, no State permit was issued for the project. The timing of the monitoring could allow for impacts to occur prior to surveys being completed. Surveys will need to be phased such that no construction occurs prior to the surveys for the area and so that clear progress is being made on the surveys throughout the three year period allowed for completion. Appendix C, which provides species-specific avoidance and minimization measures, will eventually be expanded to include all of the covered species. **This discussion will be continued at the meeting scheduled for July 24, 2001.**

A lengthy discussion ensued on the legislation that is being developed to support the Salton Sea enhancements that IID has proposed to meet their mitigation obligations. The Salton Sea Authority approved supporting the legislation (in addition to ongoing restoration planning). The funding request includes \$60 million for Salton Sea enhancements and nearly \$60 million for reservoir projects associated with the All American Canal lining. The draft HCP would be part of the legislation package, and it would be deemed to comprise full compliance with the Endangered Species Act. The implications for our planning process are not yet clear. The driving concern to this legislation are the benchmarks required by the Interim Surplus Criteria. Any funding received for the Salton Sea will be rolled into the restoration if that project moves forward within 5 years. Otherwise, the funding would be used for the enhancements proposed in the HCP to meet all obligations associated with water conservation driven changes in the Salton Sea. IID would like to continue to work with the resource agencies on these proposals. If these are not acceptable, work on this aspect of the HCP will not continue. They will forward a copy of the legislation as soon as it is introduced and available.

The group met again on **July 6, 2001**, to complete our discussion on burrowing owls and to begin a discussion on monitoring under the HCP. We began with burrowing owls. The focus of the HCP strategy for burrowing owls is on activities that could collapse or close off the burrows. The strategies in the HCP are designed to avoid and minimize the occurrence of burrow collapse and closure. Acknowledging that there would still be losses, the HCP need to promote recruitment

such that reproduction can balance losses. The greatest difficulty in this revolves around IID's limited ability to address factors other than burrow number. IID is willing to implement actions on their land, but this was offered as part of an adaptive management approach rather than as a proactive means to promote owls. Subsidies to farmers to grow crops that are beneficial to burrowing owls was another means recommended to address this limitation. Changes in crops over time may impact burrowing owls, and this should be considered under changed circumstances. Drain cleaning was clearly addressed by the strategy, but aspects of canal cleaning may also have impacts and should be addressed. The strategies do call for much greater interaction between the crews in the field and the biologist. IID did commit to having an interim worker education program developed in 6 months. The resource agencies are still looking for some kind of cap on the impacts (e.g., number of burrows and miles of canals and drains affected in a year). Some creation of burrows is being offered up front, but it was not clear what categories of activities were to be covered. Clarification will be provided. Given the cap on spending once permitted, it is important that the number of burrows provided meets all of the needs intended. Several issues were raised in regards to monitoring. The monitoring needs to be able to detect change such that actions can be taken in a timely manner. The monitoring approach needs to be defined. Are we measuring numbers, reproductive rate, both, or something else? The overall goal is to sustain the population. The first objective is to maintain the existing distribution and abundance of burrows in the area. There is a gap in our understanding of the habitat parameters required by owls. If this could be resolved, we can use the monitoring to identify adaptive management that needs to be implemented. This adaptive management would include the second objective which is to maintain other biological factors required by burrowing owls to the extent possible given IID's land and other resources.

In our discussion of monitoring, the main focus was the need to develop the right questions to be asked. Given the time frame we are dealing with, the frame work for monitoring needs to be developed quickly. Several meeting dates were scheduled. Not only do we need to develop the appropriate questions, but we need to develop the parameters to be measured and the techniques to be used as much as possible in order to support the development of an adequate monitoring budget. A combination of species specific and habitat monitoring will be used. We also need to make sure we are all using the same definitions for some frequently used terms such as habitat use and habitat quality. The species/groups are: burrowing owls, desert pupfish, bats, drain/marsh species, desert species, tamarisk scrub species, agriculture species, and Salton Sea species. We discussed deferring bats given our current lack of knowledge. IID prefers to defer the Salton Sea species to the last given their lack of flexibility in measures for those species.

The Service, CDFG, IID, and CH2MHill met to discuss burrowing owl monitoring on **July 11-12, 2001**. The goal for burrowing owls was identified as the maintenance of a self-sustaining population of burrowing owls over the current range of the owl encompassed by the HCP area. The primary objective that supports that goal is to maintain adequate burrow availability and community parameters (e.g., burrowing mammals, foraging habitat), to the extent that IID can influence these parameters, at levels to support the initial distribution and relative abundance of owls on lands covered by the HCP and affected by the covered activities. The monitoring

program will include a compliance component in that the biologist will conduct spot checks to assure the avoidance measures (provided in the worker education program) are being implemented. The effectiveness monitoring includes 2 components:

- 1) a relative abundance and distribution survey (RAD) to be conducted annually in April, with 20% coverage each year in a rotating panel scheme if feasible (default is by major "drainsheds"); and
- 2) an intensive demographic study in 2 or 3 sub-populations that will measure productivity and recruitment over a 12-15 year time period (the number of nests to be determined statistically).

IID expressed concern that the level of monitoring was not commensurate with their likely impacts to the owls, but this was deemed necessary to establish the baseline condition of the population. Adaptive management actions will be taken on the basis of the population status as defined by the demographic study or based on a drastic change identified in the RAD. If the cause is determined to be covered activities, the Implementation Team (IT) will work with IID to enhance their avoidance and minimization measures and/or consider constructing artificial burrows in appropriate areas. IID's farmer education program will be of assistance in minimizing impacts from farming activities. IID also raised the concern that they may be held responsible for birds moving away from canals or drains to other lands in the Imperial Valley. Burrowing owls are site tenacious, and the burrows present along canals and drains are likely to be more stable than those in farmed areas. The contingency fund developed as part of the HCP will be available to support adaptive management, and it will include funds to support up to 4 additional years of demography studies. The RAD will be conducted once throughout the entire valley to identify the appropriate areas for demographic studies to be conducted. The Service will provide an example data form. The results will be reported to the Service and CDFG annually, with a final report to follow the demography study and baseline RAD (3 complete surveys).

We continued the discussion by reviewing some of the proposed strategies. It was decided that the burrow bank would not be included as an action, but that it could be implemented as a response to a change in population status. We discussed the education programs. The worker education program will be a structured program, whereas the farmer and public education components would be more focused on providing information. The farmer education materials would focus on farming impacts to owls including pesticide use. The public outreach would be more general and could include periodic mailings of leaflets to all of IID's customers.

Nancy Gilbert and Carol Roberts traveled to Sacramento for a meeting on **July 17, 2001**, of the water agencies with the Director of the CDFG. High level managers and legal representation were present from IID, SDCWA, CVWD, and MWD. The primary topic was the possibility of completing the permitting process for the water transfer, including the Salton Sea, through the CDFG in time to meet the Interim Surplus Criteria and Quantification Settlement Agreement time lines. The water agencies gave some introductory remarks, and identified the delays in the Salton Sea restoration and Lower Colorado River Multi-Species Conservation Plan as major stumbling blocks in the permitting process for the transfer. They were relying on those processes to address the major impacts associated with changes in flows associated with transferring water from

agriculture to urban use, particularly in regards to the Salton Sea. In the absence of the restoration being permitted, they are looking for ways to achieve permit issuance criteria for the transfer relative to the Salton Sea. The water agencies believe that they should not bear the restoration costs as this would not be proportional to the magnitude of the impacts that the transfer will likely cause. They are looking for federal assistance in the form of funding for enhancements for the Salton Sea as well as a truncated permitting process for the Endangered Species Act requirements. The CDFG expressed a strong preference to continue working through the process rather than having the agencies pursue parallel state legislation. The CDFG was also concerned that the funding figure proposed in the legislation would not be enough to offset the impacts of the transfer. The group discussed the possibility of tying the permit into the restoration process in some way, but the water agencies were greatly concerned about the timing given there isn't overwhelming support for the alternative that is likely to be chosen. We discussed the possibility of streamlining the process by reducing the covered species list, but that approach was not acceptable to IID. The water agencies felt comfortable with the progress that had been made on other issues, but they were concerned that the Salton Sea could not be addressed without legislative action. The resource agencies did identify some other issues that are still waiting for resolution. The Service acknowledged that it will be difficult for us to deviate from the 5 Point Policy that requires 90 public review, and the water agencies inquired as to whether the Service could provide guidance on how that might be reduced. The California Resources Agency representative recommended against public outreach prior to resolution of the major issues. The issue of fully covered species under California law was set aside pending state legislative changes that may be forthcoming on that issue.

The Service, CDFG, IID and CH2MHill next met on **July 18, 2001**. This meeting was devoted to focusing the remaining tasks on the high priority species, and then prioritizing those tasks given that the intent is to circulate the Draft EIS/EIR and the proposed HCP on **December 1, 2001**. We prioritized these tasks as provided below:

- Priority #1: Salton Sea Habitat Conservation Strategy
Priority Species - Brown pelicans, white pelicans, black skimmers, gull-billed terns, double-crested cormorants
- Priority #2: Desert Pupfish Habitat Conservation Strategy
- Priority #3: Drain Habitat Conservation Strategy
Priority Species - Yuma clapper rails, California black rails, Least bittern
- Priority #4: Agricultural Habitat Conservation Strategy
Priority Species - Mountain plovers, white-tailed kites, white-faced ibis, black terns, long-billed curlews
Second Priority Species - Hispid cotton rats
- Priority #5: Tamarisk Scrub Habitat Conservation Strategy
Priority Species - Large-billed savannah sparrows, white-tailed kites, yellow-breasted chats, willow flycatchers, yellow-billed cuckoos
- Priority #6: Desert Habitat Conservation Strategy
Priority Species - Desert tortoise, flat-tailed horned lizard, Pierson's milk vetch, LeConte's thrasher

- Priority #7: Bat Habitat Conservation Strategy
- Priority #8: Razorback Suckers
- Priority #9: Colorado River Toad Habitat Conservation Strategy
- Burrowing Owl Conservation Strategy - Done

We scheduled additional meetings in order to address all of these priorities in time to **wrap up input on the HCP by the end of September 2001**. We discussed briefly concerns over the proposed enhancements for the Salton Sea and the limitations of the funding level in the proposed legislation. In particular, the suite of enhancements do not specifically address our high priority Salton Sea species with on-site enhancements. IID informed us that the amount was deemed appropriate by the bill's sponsors and would not be changed. The bill's language has been modified to allow for increased flexibility as to how the funds are spent. In addition, the bill does not preclude future funding requests for expanded or additional enhancements. CDFG raised the possibility of considering a fish hatchery as part of the project to extend the availability of fish for fish-eating birds and recreational fishing. IID was open to the concept pending an analysis of the term of the benefit in the absence of a full restoration.

On **July 19, 2001**, the group re-convened (CDFG by phone) to discuss drain monitoring. The key to the approach here is to maintain similar life history functions of the target species in the created habitat that currently occur in the drains. The drain vegetation survey will not be completed prior to completion of the HCP. The previous Hurlbert figures will be used as estimates with the final totals to be determined based on the surveys once completed. The Service was concerned that there needed to be a stated minimum acreage to be provided in the HCP with increases as determined by the surveys to be accommodated in addition. IID stated that they want to be able to adjust the acreage up or down as indicated by the surveys. The Service is reviewing this issue. The approach to monitoring would include point counts for birds, call counts for rails and frogs, and small mammal trapping. The surveys would be conducted seasonally, and breeding use would be assumed if the species was present during their breeding season. Three years of baseline surveys are to be conducted in the drains as the basis for future comparisons.

The wetland creation is scheduled to occur within 5 years of permit issuance. CH2MHill has recommended phasing that so we can evaluate each phase prior to construction of the next and make modifications as necessary. This would require 15 years for construction of the complete wetland habitat package. Following the creation of habitat, surveys will be conducted for 5 consecutive years. Surveys would then be scheduled for every 5th year following this initial period. The group discussed the need for continuing the drain surveys once the created habitat was replaced. Although there are advantages and disadvantages to both approaches, we determined that they would only be continued if the IT felt it necessary to interpret the effectiveness monitoring. Because active management will be required for these habitats, it was decided that a management fund is appropriate here rather than the contingency fund approach taken with the burrowing owl. IID is looking for input from the resource agency land managers as to how best to design and manage habitat for Yuma clapper rails. It was decided that although surveys would be conducted for other species, our management would focus on clapper rails

given we have more information and experience in managing for this species that we do for our other priority species. We will accommodate the other species needs to the extent those needs can be identified and they are not incompatible with managing for Yuma clapper rails. The group was also seeking ways to focus monitoring on habitat elements given use cannot be guaranteed. The group agreed that the appropriate approach was for IID to commit to managing the habitat in the same fashion as the Service and CDFG manage their lands for Yuma clapper rails, and that surveys for this species would be conducted on the same schedule. Should the resource agencies cease surveys, the survey frequency would revert to the schedule of every 5th year following the initial 5 year survey period following creation. IID also agreed to work cooperatively with the Service and CDFG in efforts to optimize management including gathering data on some habitat parameters as part of the survey efforts. Point counts for other species would be conducted on the original schedule (every year for 5 years, then every 5th year).

The group discussed amphibian surveys and determined an approach for lowland leopard frogs. The baseline surveys will be conducted in the drains. If no lowland leopard frogs are found, the surveys will not continue. If frogs are identified in the drain surveys, the created habitat would be surveyed per the schedule. Small mammal trapping for cotton rats will also be conducted along the drains. Herbaceous cover will not be mitigated in the created habitats, but avoidance and minimization measures will be developed if use by these species is found along the drains.

The group met at the Carlsbad Fish and Wildlife Office on **July 24, 2001**. The topic of discussion was the drain strategy. After some consideration of the proposal, the Service raised concerns about how reviewers of the strategy would view its adequacy. The mitigation would replace 20% of the drain habitat and would take a minimum of 5 years to be implemented in which time 100% of the drain habitat would have been cleared on a rotating basis. In addition, this process would be repeated an average of 15 times across the life of the permit. We recommended that IID consider a 1:1 replacement ratio for all suitable habitat in the drains, and we suggested that it would be appropriate to identify a minimum commitment that would be adjusted up if necessary based on the vegetation surveys that are to be conducted in the first year following permit issuance. IID was open to this approach, but they required a cap on the amount of habitat creation they would be responsible for as part of the HCP. Given that the Hurlbert report is the best information currently available, we used the estimate of vegetated acreage derived from that study as our maximum (652 acres). Because of the difficulty in demonstrating absence, the concept of occupied habitat was replaced with what is deemed suitable for the covered species. The Service has in house expertise that could be called upon to assist us in determining which vegetation types of those identified in the surveys are suitable for the covered species. The question was raised as to whether drain species surveys would be required. We determined that it may not be necessary if we are mitigating 1:1, but it would be desirable to have some site specific information on the species habitat use to confirm our determinations of suitable habitat. We will need to agree on what experts would be involved in this determination and identify a process for resolving any disputes on technical issues. The habitat creation could be phased to accommodate any new information developed based on the results of the baseline vegetation and species

surveys. The proposal was to create 1/3 of the habitat at 5 year intervals so habitat construction would be complete within 15 years. This is currently being considered.

The next issue was related to whether this acreage would cover only the drain cleaning activities or all activities in the drains. Given that there is a 100% replacement, IID felt construction impacts should be included in that. The Service concurred with that approach, but it is important that the relative magnitude of permanent (construction) versus rotational (drain cleaning activities) impacts be specified in the document. The basis of our concurrence was the fact that permanent impacts are currently anticipated to be relatively minor. IID agreed with the caveat that any quantification is their best estimate, not a cap. The cap on habitat creation will still apply if they exceed that value. The last issue to be addressed related to the acreage is water quality impacts. The Service will confer internally on whether a 1:1 replacement is adequate to address both types of habitat creation implemented in association with contaminant impacts. The first part of the Service's approach is to provide alternative habitat to attract nesting species away from the contaminated habitat. The second part of the approach is to provide additional breeding habitat to supplement reproduction in the population in an effort to offset reproductive losses among those individuals that forage in the contaminated habitat. We will provide a response as soon as we have had the opportunity to confer with our in-house expert.

The next issue raised was the current ceiling on the selenium concentration in the water of 5 µg/L or the concentration in the source water. This is an issue for two reasons. We have determined that this concentration was a jeopardy for listed species in our evaluation of EPA's California Toxics Rule. Also, impacts have been found in sensitive species due to biomagnification of selenium at this water concentration. If habitat is to be created to offset impacts, including those associated with degraded water quality, it should not then be subject to those same kinds of impacts. IID was not open to the possibility of having to treat water prior to discharging it into the mitigation habitat. Additional discussion will be required on this issue.

Chapter 3 in the document will be re-structured to address these changes. CH2MHill will develop a preliminary determination of vegetation types used by covered species for review to supplement the discussion in the document. IID is working on some text to describe how burning is used in drain maintenance to be incorporated into the text as well. The 84 acres of "adjacent" wetlands will still be addressed separately either through supplementation of the water supply to these areas or creation of replacement habitat. The resource agencies concurred with the vegetation survey approach developed previously. Issues for our next meeting include the need for supplemental mitigation for water quality and more specifics on monitoring and management. IID stated that they would provide a copy of the drain model results to the Service at that meeting.

The group met on **July 27, 2001**, to continue the discussion of the drain strategy. The first topic of discussion was the need for additional acreage to mitigate the impacts of drain selenium contamination. After conferring internally, it is the Service's determination that additional habitat would be appropriate to offset the impacts of the selenium contamination in the drains. The Service has addressed selenium contamination in other systems using a two-prong approach that

includes alternative habitat (the 1:1 drain mitigation would fulfill this need) to attract species away from the contaminated habitat and compensation habitat that provides for an additional increment of reproduction to offset any reproductive losses associated with birds that may still use the drains. The Service supported the approach taken by CH2MHill in their initial development of this acreage. CH2MHill was of the opinion that this was mitigating twice and was unnecessary given that replacement habitat would be for 100% of the suitable habitat (complete take permitted). IID was open to the concept, but they wanted to be assured that this extra mitigation would allow them added flexibility in managing the drains. After a lengthy discussion it was decided that (pending IID Board approval) habitat would be mitigated based on a vegetation survey replacing 100% of the suitable habitat with additional acreage added for selenium impacts associated with on-farm and system conservation. The parties agreed to use 190 acres as a minimum commitment to mitigate for maintenance, construction and selenium impacts. Following the vegetation surveys, this number will be recalculated based on the survey results and the selenium formula developed by CH2MHill. **If this total is less than or equal to 190 acres, 190 acres of mitigation habitat will be created. If this number is greater than 190 acres, additional acreage will be created up to 652 acres (the agreed upon cap).** Measures 1, 2, 4, 5, and 8 will thus be collapsed into a single measure. The text discussion of the methodology will be maintained. IID then suggested that the measure that provided for surveys for construction projects during the breeding season (Measure 6) should not be required as no surveys are required for maintenance activities. Additional discussion occurred whereby the group concluded that it would be appropriate to maintain this measure for projects that resulted in permanent losses of habitat. As these projects are generally scheduled, it should be feasible to schedule them outside the breeding season. IID and CH2MHill will develop language that specifies what projects fall into this category and what construction is considered routine maintenance. The Service requested that this include a quantification of these projects in addition to the definition. CH2MHill requested guidance on how the effects analysis should be presented. The Service suggested that they more completely delineate the effects then follow with an explanation how the measures offset those effects. The current discussion in the document does not adequately address the effects, particularly for our focus species.

We briefly discussed the monitoring approach we had discussed previously. It was agreed that long term surveys would not be needed in the drains. Baseline surveys, for vegetation and covered species, would be conducted in the drains. The created habitat would be surveyed for Yuma clapper rails on the schedule used by the resource agencies (currently annual) but no less than once every 5 years (should the agencies cease to do them more frequently). Management would also be in line with what the resource agencies were doing. CH2MHill requested a copy (second request) of the National Wildlife Refuge's management plan. The Service agreed to contact the Refuge with their request. One management issue that was in conflict with the HCP proposal was the concentration of selenium that would be permitted in the water used to support the habitat. The Service is on record through the California Toxics Rule biological opinion that 5 µg/L selenium is not adequately protective of wildlife. We have recommended that 2 µg/L be used as a maximum in water for wildlife habitat. Given that the Colorado River is the best quality water available in the Imperial Valley, the Service requested that IID commit to using this water

for their created habitat. IID responded that this raises a water rights issue, and they may not be able to comply. CH2MHill recommended that we keep the current standard, but this would be inconsistent with the Service's previous determination. After lengthy discussion, we concluded that it would be acceptable for the restriction to be that: **IID will use Colorado River water, water of equivalent quality to Colorado River water (in terms of selenium concentration), or water with a selenium concentration at or below a selenium criterion promulgated by EPA with a no-jeopardy biological opinion from the Service.** IID will take this to their Board for approval. Several other issues were deferred to the future to be determined by the HCP IT including siting of these habitats. CH2MHill agreed to develop some general siting criteria.

The last issue discussed was the fact that IID had found errors in their drain model report and would not be able to provide it to the Service at today's meeting. They were hopeful that it would be available sometime the following week.

The group re-convene in Sacramento on **July 31, 2001.** The topic of this meeting was the **Bureau of Reclamation's Salton Sea model.** Paul Weghorst from the Bureau's Denver Office gave a presentation on the model including the assumptions that went into developing the model, calibration and verification of the model using historical data, and the predictions made by the model based on four scenarios (including a baseline condition). The baseline incorporates the previous water transfer that was recently completed, a higher salinity level for the Colorado River, reduced surplus flows, and reduced flows from the Coachella aquifer resulting from overdrafts. Salt precipitation in the Salton Sea was included, but the value used for each run was sampled randomly from the entire range of precipitation rates identified by salinity experts. Baseline runs indicate that the elevation and area of the Sea will continue to go down, and the salinity will continue to rise. The two tailwater recovery scenarios evaluated indicate that the rates of change will increase for all three parameters, although the absolute change will not be large in the short term. Conservation by fallowing gave results that were intermediate but somewhat closer to the baseline condition. Mitigation fallowing could be added to this final scenario to allow for increased flows to the Sea that would result in no net increase in the rates of change of salinity, elevation and area over the baseline condition. IID raised concerns over mitigation fallowing in regards to water rights and accepted beneficial uses. IID also expressed concerns with the solar pond alternative for restoration in regards to the location being in conflict with possible mitigation habitat locations. The Service raised concerns over the assumption that 100,000 acre feet of water per year would go to CVWD rather than MWD. If this were not correct, the model might underestimate the magnitude of the changes. The representative from CVWD said that they would be seeking out that volume of water from some other source if not from IID, so the volume assumed to flow to the Sea should be correct. The Service will require some substantiation of that assumption.

The results of the Imperial Valley hydrological model were not yet available to the Service.

Following the HCP meeting, a second meeting was held between the water agencies and the Directorate of the CDFG. The California Resources Agency was represented by Mike Spear.

The group provided copies of the priorities and the schedule we had developed to complete work on the HCP development by the end of September as the water agencies had requested. There are many issues yet to be addressed, and monitoring and adaptive management have to be included. The water agencies re-iterated that **this date was based on a completion date for all QSA requirements of December 31, 2002.** CDFG recommended that work begin immediately on the Implementing Agreement (IA) framework with details to be added later. **The Service identified the need to have access to the draft EIS/EIR sooner rather than later if we are to complete this process in their time frame.** IID stated that **this should be available soon.** When asked how the Salton Sea will be addressed, IID responded that the approach is based on the approval of Federal legislation. The State did not appear to be interested in working on the HCP in this case given the negotiating disadvantage to them associated with such legislation. The water agencies were still interested in pursuing an administrative solution with the State, but they were not willing to cease their efforts on the Federal legislation given that failure to meet the deadline is not an option for California. Mike Spear suggested that a planned release of the HCP and Draft EIS/EIR on December 3, 2001 does not require Federal legislation. Instead, he recommended that there should be a way for the transfer to be linked to restoration without excessive burden on the water agencies such that a permit can be issued within their time frame. Funding for the enhancements could still be pursued without the override of the Federal Endangered Species Act. CVWD raised concerns over tying the two together given that restoration will likely take some time to be approved by Congress. Mike Spear responded that they cannot be untied biologically. IID wants assurances that the agencies would not come back for additional mitigation in the future.

The Service continues to support going through the normal permit process as appropriate to our fulfilling our mission. Funding may be appropriate to address the water transfer's contribution to the degradation of the Sea. The State would like to see a commitment to restoration of the Salton Sea from all of the water agencies, including the possibility of fallowing for conservation. This approach apparently has very little support in the Imperial Valley, and it will take time to get local support for this as part of the solution. The water agencies stated support for the restoration, but not at the expense of the southern California economy. The transfer must be allowed to go forward. The water agencies were not willing to defer the legislation until the next Congressional session stating that there would not be adequate time to complete all of the necessary steps. Also, they need to limit the time frame for legal challenge given the Interim Surplus Criteria (ISC) benchmarks so that aspect will also have to remain.

When asked, IID stated a willingness to consider mitigating for the transfer's incremental effects on the Sea. However, it depends on the specific benchmarks that are used. If a salinity of 50 parts per thousand is considered to be a limit for fish, then the transfer does not significantly change when that will be reached as compared to baseline. We haven't yet resolved what benchmarks will be used. The Service pointed out that there have been previous reductions in the inflows to the Sea that were identified as not being significant and so were not addressed. This is contributing to the current condition of the Sea. CDFG recommended that we focus on restoring the Sea not just dealing with increments because "the Sea is going to die anyway". IID responded

that they will only deal with the effects of the transfer. The State suggested that all need to take some responsibility for the assuring the restoration of the Salton Sea. The water agencies agreed to work with the State on developing language that would link restoration to the transfer HCP to satisfy permitting requirements but be acceptable to the water agencies. The water agencies were essentially offering to commit to promoting restoration. IID is seeking assurances, but only the Service pointed out that only changes beyond those predicted by the model could be considered unforeseen. Changed circumstances like those identified by the model need to be addressed. When the discussion returned to the current schedule, the Service recommended that the process could be facilitated by giving IID staff more authority in the decision-making process and by reconsidering some of the species on the current list. IID did not feel that the current funding cap would provide for all of the biological needs of the HCP. A follow up meeting on the "linkage language" was scheduled, and the meeting was adjourned.

The next meeting was held in the Imperial Valley on **August 8, 2001**. This was the group's first opportunity to begin the discussion on the Salton Sea strategy. IID requested that we all keep in mind that this program will only mitigate its impacts. IID will not be taking on responsibility for restoration of the Salton Sea. They will only take responsibility for the difference between what will occur with the project versus what would occur in baseline conditions. In the case of fish-eating birds, this is the amount of time the Sea will not be available for foraging to these species as compared to baseline. For discussion we used a benchmark salinity of 60 parts per thousand. Based on the Bureau of Reclamation's Salton Sea model, the Salton Sea would reach that benchmark 9 years sooner with the conservation and transfer program. However, providing for the needs of the numbers of fish-eating birds that use the Salton Sea even for this amount of time is beyond the means of IID. Either we would need to restore the Sea, or we would need to create something nearly as large. There are smaller scale actions that can be implemented, but we need to determine what these should be. CDFG would like to see a hatchery included as part of the enhancement package. They are looking at sport fish and tilapia (which is a species that is easy to raise in ponds) to address the recreational impacts as well as impacts to fish-eating birds.

There are impacts resulting from elevation changes such as loss of nesting and foraging areas. IID felt comfortable with the fact that these are largely engineering issues that could be addressed. They suggested the possibility that shallow shorebirds foraging areas could be bermed and maintained in a flooded condition. They were not as interested in island creation in the Sea given that the elevation may continue to change for some time. Nesting habitat can be provided in a variety of situations including on smaller scales. Small islands could be placed in the mouths of drains and/or in the created wetland habitat to address species such as the gull-billed tern and black skimmer. Shoreline pools should also be considered for desert pupfish. If such pools are not created naturally by wave actions as the Sea recedes, it will be necessary to evaluate the need to artificially create such habitat. Part of this process may be a study of how pupfish use shoreline pools in the Salton Sea system.

There will be impacts to fish-eating species and desert pupfish from changes in salinity. A hatchery may provide for the extension of fish presence in the Salton Sea, but would only provide

a short term remedy. Although fish ponds could be created for fish-eating birds, IID did not like this option given the short term nature of their requirement to supplement fish. They were more interested in off-site projects that could provide more extended benefits to covered species. One of the questions that came out of the discussion was in regards to whether the Salton Sea provides key habitat for any individual species. The white pelican figured prominently in this discussion. We do not have information at this time that would confirm or refute the importance of the Salton Sea as key wintering/migratory habitat for the white pelican. The general approach that is being considered is to: do studies to evaluate the importance of the Salton Sea to fish-eating species, see if restoration is on track to move forward, and choose the enhancements that make the most sense given that there either will or will not be a restoration project. A hatchery would make sense as a temporary bridge to a restored Sea, but it may not be a viable choice if restoration is not expected to move forward. In the absence of restoration, we may be forced to consider off-site mitigation for some species. The Service and CDFG were asked to provide input as to whether the agencies would consider off-site mitigation and for which species. CH2MHill is also looking for input on what specific studies will be needed. The HCP IT would be responsible for determining what response actions are most appropriate given the outcome of any studies and the fate of the restoration program.

The group met again on August 9 and 10, 2001, to tour the pupfish drains in the Imperial Valley. In the afternoon on August 9 the group met to discuss if the strategies as currently laid out made sense. Touring several of these drains provided much material for discussion in the afternoon. It was clear from the tour that there are drains, particularly on the southeast side of the Sea, that are not wide enough to clean and still leave vegetation behind. There were also examples of drains that are left unmaintained because they have adequate slopes to achieve the needed drainage (e.g., Trifolium 19 and Trifolium 1). Several of the measures originally proposed came into question, however. Given the fact that adult tilapia were seen gathered at the mouth of one of the drains, we questioned the appropriateness of cleaning in a downstream direction. Timing restrictions were questioned given that pupfish may bury themselves in the mud during the winter months and thus would not be able to avoid the cleaning equipment. Another concern that was raised was the possibility that dredging only part of the drain would leave the vegetation above the new flow level and would then not provide any habitat for pupfish. The key to determining what is more appropriate in this regard is knowing what the flows will be following cleaning operations. It was undesirable to have these measures result in the need for more frequent cleaning as well. Connectivity and water quality were identified as issues that would need to be addressed. **The model results were not yet available.** We re-aligned the strategies to reflect the discussion. The strategies that remain are as follows:

- Strategy 1 - IID will maintain the existing habitat and increase the habitat as changes in elevation allow;
- Strategy 2 - IID will provide for some connectivity between drains to allow for pupfish movement;
- Strategy 3 - A study will be conducted to determine if pupfish do bury themselves during winter months requiring avoidance of those months of the year for cleaning;

Strategy 4 - Activities that require dewatering will include salvage and relocation of pupfish;

Strategy 5 - Water quality impacts (i.e., selenium) will be examined by the planned Service study and appropriate actions will be implemented such as making highly contaminated drains inaccessible, enhancing those areas with less contamination, and incorporating simple biological treatment systems into the drains.

These strategies will be reviewed at an upcoming meeting and finalized. In addition, we hope to develop a more specific monitoring and adaptive management program at that time.

The group met again on **August 14, 2001**, to discuss the desert strategies. IID felt that they could provide an estimate of the acreage of the rights-of-way in the desert areas and the disturbed areas within those rights-of-way from their documentation and aerial photographs. **This was requested with our initial review and re-iterated when comments were submitted to the consultant on July 19, 2001.** The objective is to provide some sense of scale in the document for the areas that are routinely used in the course of the covered activities. We reviewed the covered activities that were considered to have no effect on covered species and found that there were drains associated with seepage collection that do require maintenance. This topic will be removed from the table and discussed. Additional information will be provided in the discussion of the effects of covered activities to specify the frequency of these activities. The text of this section will also be re-worded to clarify what is meant by each of the covered activities. The discussion will consider the fact that all structures are likely to require replacement during the life of the permit. All activities will be limited to the currently disturbed areas to the extent practicable, and all impacts to desert habitat will be mitigated at a 1:1 ratio. IID felt confident that such impacts could be limited to 5 acres or less. IID will provide a list of the types of structures that are included in construction activities. The lining of the All American canal will not be covered, but maintenance of the existing canal will be included. For the purposes of discussion, the HCP will assume it will be maintained as an emergency conveyance. If IID determines that this is no longer desirable, changes to the use/maintenance of the old canal can be addressed by amendment. It is anticipated that any changes would result in fewer impacts. Management will be in accordance with the Service's biological opinion for the project. Operation and maintenance of the new canal segment will be covered as for the existing operating portions of the canal. Minor changes were incorporated into the strategies and Appendix C to better address specific species needs. Monitoring is planned that will include baseline surveys and presence/absence surveys every 5 years to update the worker education program. Because the program is focused on avoidance, specific effectiveness monitoring has not been identified. Compliance monitoring will be included, however. IID will encourage their employees to report all sightings, injuries and mortalities as part of the reporting process.

The results of the hydrological model were not made available to the resource agencies at this meeting.

The group met on **August 15, 2001**, to complete the discussion of the desert pupfish strategies. A new list of pupfish strategies was provided, but this was lacking any supporting text. It was

decided that the most practical measure of drain habitat for desert pupfish was by the linear distance between the final control structure on the drain and the Salton Sea. As the Sea recedes, there will be opportunities to add other habitat features that could benefit pupfish when these drains are extended. IID committed to maintaining up to twice the current amount of potential habitat based on linear distance. Beyond this amount, no specific maintenance will be provided. However, drain water is expected to continue to flow to the Salton Sea even without specific maintenance (as was seen with some of the existing drain examples visited in the field). Connectivity among the south end drains will be provided for in three subsections: northeast of the Alamo River, between the Alamo and New Rivers, and northwest of the New River. The specific method of connection will be that which is most cost effective given the topography and the drain configuration.

The strategies were re-organized to better reflect the priorities of the program:

Strategy 1 - no net loss of potential pupfish habitat in the drains as measured based on linear distance in the drains;

Strategy 2 - The HCP IT will develop design features for incorporation into the drains that address water quality concerns;

Strategy 3 - IID will take advantage of the receding Sea to increase the potential habitat for desert pupfish by extending the drains and providing for connectivity between them;

Strategy 4 - targeted studies will be conducted to evaluate specifics of the maintenance procedures and identify the appropriate timing direction and extent of maintenance on an annual basis; and

Strategy 5 - Activities requiring dewatering for construction in drains will include salvage of desert pupfish by qualified personnel.

Monitoring of water quality constituents was also discussed. In regards to selenium, collection and analysis of invertebrate prey items offers the most efficient means of tracking exposure in the drains. Turbidity should also be monitored and controlled to the extent feasible. Population surveys will be conducted to demonstrate use of drain extensions and connections. If more effective survey techniques are developed in the future, they will be incorporated into the monitoring program.

The Salton Sea was the topic of the meeting on August 21, 2001. A brief synopsis of the proposed state legislation was provided. The proposed covered species of greatest concern in this discussion were the brown pelican, the American white pelican, the black skimmer, and the double-crested cormorant. CH2MHill provided a review of the approaches that they had considered to mitigate impacts to these species. All options were dropped from consideration because of their costs. Based on the Bureau of Reclamation's Salton Sea model, 60 parts per thousand salinity will be reached 9 years sooner with the project as compared to the baseline condition. This threshold is an estimate of the salinity threshold for tilapia reproduction and was agreed to by the group. Some of the assumptions provided in the options discussed were not considered appropriate and should be reconsidered in the analysis. IID requested ideas for alternatives given that none of the options they had explored appeared to be feasible. They would

prefer to identify smaller scale projects that can be permanent (including off-site) that could benefit these species rather than addressing the full number of impacted birds over just the course of the 9 year time differential. They are not considering projects that would address the full number of birds over the life of the permit. The other option discussed was to provide some funding to study these species, better identify the needs that have to be met to mitigate the impacts, and design mitigation actions accordingly in the future. The Service was concerned that this approach was too general to meet the permit issuance criteria. We will need to be able to demonstrate that the benefits offset the impacts, and that cannot be done without at least having some criteria that the future projects will have to meet.

The Service raised the issue of how the transfer might affect the ability to implement a successful restoration project. IID responded that their concern was to mitigate the impacts of the transfer; the responsibility to restore the Sea was with the lead agencies on the restoration project. However, given that on-site, in-kind mitigation is the most appropriate, we need to know what the possibilities are within the Salton Sea area and whether those possibilities need to be independent of a restoration project. IID is currently looking at providing funds towards the restoration or conducting enhancements that mitigate the impacts independent of a restoration project. The legislation is the preferred vehicle for obtaining the needed funding regardless of the option chosen.

To move forward with the discussion, the group agreed to discuss options that could be considered in the absence of restoration, focusing on the 9 year time differential predicted by the model. CH2MHill will look at ways to quantify the impacts. Funding requirements to offset those impacts would then be developed. The current suite of off-site projects provided in the HCP does not specifically address the species most affected by the changes at the Salton Sea. Some alternatives for consideration were provided. We began the development of a list of criteria that could be specified in the HCP for developing projects. Thus far this includes: the location should be in the Pacific flyway, they should offset the impacts of the water transfer in terms of magnitude, and they should provide for the functions and values required by the species impacted at the Salton Sea. The concern with incorporating off-site projects into this effort is that they may be too remote from the location of the impacts to truly offset them. This issue still needs to be resolved.

Issues yet to be resolved as of this meeting include: addressing the habitat and connectivity needs of desert pupfish at the north end of the Sea, drain water quality results (they are due to the office shortly), and a re-write of the pupfish strategy text.

The Service met with management staff from the CDFG in Sacramento on August 22, 2001. The discussion focused on the Salton Sea. The major problem with the approach proposed in the draft state legislation is that permitting is based on the completion of a report that is non-binding in regards to actions taken to restore the Salton Sea. The Resources Agency was concerned that piecemeal approaches would also be unacceptable in terms of fully mitigating the impacts of the water transfer. Under the Endangered Species Act, a report to Congress is not likely to meet the

permit issuance criteria. Taking advantage of the opportunity to encourage a more rapid completion of the Feasibility study is reasonable, but there have to be additional actions to result in meeting the criteria. All agreed that the water agencies should support restoration publically to help increase its chances of success. Concerns were raised by both agencies regarding the 9 years of mitigation being provided for a permit with a life of 75 years. This 9 years may mean the difference between success and failure of the restoration.

The Service was invited to participate in the third meeting between CDFG and the water agencies held on August 22, 2001. CDFG wanted to revisit the species list and determine if there was willingness among the water agencies to drop species from the list. Some species can be addressed by the habitat approach to mitigation, but others are lacking needed information and should be reconsidered. The water agencies asked the resource agencies to provide a list of those species the resource agencies would like to have reconsidered and why. The group discussed what actions were driving the schedule. Although the State Water Resources Control Board action is key, it was not the only factor in the need for completing the HCP by the end of September 2001. The water agencies will provide a clarified schedule that highlights the critical paths. The Service reminded the group that our 5 Point Policy requires a 90 day public review of the Draft HCP and EIS package.

In regards to the Salton Sea and state legislation, the Resources Agency was emphatic that the language be clear that the compliance provided is only for Salton Sea species. The "in-valley" species will go through the normal compliance process as part of the HCP. In the absence of a legislative solution, the water agencies expressed their intention to pursue a determination that impacts to Salton Sea species are not significant due to their temporal nature and do not require mitigation. Both the Service and the CDFG responded that whether temporal or not, the impacts constitute take that must be permitted and so must be mitigated. The water agencies hope to see action on the Federal legislation in September 2001.

A brief follow up meeting was held between the two Federal agencies (the Service and the Bureau of Reclamation) and the water agencies. This was an opportunity for the Acting Manager of the Service's California-Nevada Operations Office to express his concerns over the reliance on Federal legislation to resolve the Salton Sea issue. Some alternative approach which meets permit issuance criteria must be developed in the event that the legislation does not pass. Also, reducing the species list will facilitate the process from a workload standpoint. The Service agreed to provide a list of species to be reconsidered and to work with the water agencies in developing sound alternatives that will offset the impacts.

Two copies of the hydrological model results for the Imperial Valley were received on August 22, 2001. However, only the 12 year model runs were provided for the project. The 75 year runs have not yet been made available to the Service. One copy was forwarded on to CDFG. We were informed that the tables for the 12 year runs and the entire package for the 75 year runs will be provided once needed corrections have been made.

The group met again to discuss the Salton Sea on August 29-30, 2001. The first topic to be discussed was how to address pupfish using the drains that empty into the north end of the Salton Sea from the CVWD area. CVWD had envisioned a separate HCP for effects occurring in the north end. Another option offered by the Service is combining these effects with the IID HCP but have separate Implementing Agreements and permits. CVWD had some concerns over the legal ramifications of that approach relative to the QSA. IID explained that the environmental compliance has been separated based on effects associated with conservation of water versus effects associated with the use of conserved and transferred water. IID is responsible for effects associated with water conservation. They stated that they will take the responsibility for addressing these impacts using strategies developed for the south end. **Copies of the latest version of the pupfish strategies were provided (absent supporting text and a discussion of monitoring).** Land ownership was identified as a potential factor that could complicate implementing these actions. IID and CVWD will look at this aspect more closely, although they felt that the connections could be placed below any Indian lands currently under the Sea. We concluded the pupfish discussion with a reminder of the need for IID's actions to be compatible with CVWD's ongoing operations and to accommodate any increases in flows such that the habitat is suitable for pupfish in the extensions and connections.

There could also be impacts to adjacent wetlands and fish eating birds at the north end associated with a receding Sea. IID stated that they are intending to address the entire range of transfer options, including all of the water leaving the Salton Basin. However, the model results provided to date assume the CVWD will be the recipient of 100,000 acre-feet of the conserved water. We will need to see the results for the worst case scenario in order to evaluate the mitigation needs. CVWD concurred that they would not be able to receive any water until they had addressed the effects of use of that water, but they do not want to rely on the on-going multi-species efforts because of the potential for delays to extend beyond December 31, 2002. They are planning a separate HCP to address those impacts. The resource agencies will need documentation of how the responsibilities related to mitigation of the effects of water conservation at the north end will be addressed and how actions associated with receiving this water are not considered interrelated and interdependent. This needs to be provided in the form of a project description that draws the line between activities that are covered and those that aren't covered, and a justification for this separation needs to be included. The documentation also needs to identify where the effects of the receiving of water will be addressed, and all documents need to be available for review when the HCP is released. The Service concurred with the approach to address growth enabling/inducing effects through the regional multi-species plans.

Adjacent wetlands will be maintained or replaced as is called for at the south end of the Sea. The resource agencies identified two special cases that cannot be replaced with wetlands in other locations. These are Salt Creek and San Felipe Creek. The lower end of Salt Creek is occupied by pupfish and has emergent vegetation that has been used by Yuma clapper rails. Because of the pupfish occupation, IID will assure that it is maintained in place, possibly by creating a dam structure that will maintain water levels as the hydrological pressure from the Salton Sea does now. San Felipe Creek requires further discussion as we need to find a way to provide the San

Felipe Creek pupfish population a refugium from flood flows. Currently, pupfish may be washed downstream by floods and could be replaced by Salton Sea fish swimming upstream to re-occupy the marsh. If salinity gets too high in the Sea for pupfish survival, this source could be cut off from San Felipe Creek. We discussed the possibility of creating pockets off the main channel for pupfish use during floods to maintain the San Felipe Creek population in place. IID will develop measures to address these two special cases. Riparian habitat in the Whitewater Channel should not require replacement as CVWD believes these areas are supported by shallow groundwater.

In our discussion of the Salton Sea, the resource agencies expressed their concerns over the lack of appropriate off-site mitigation opportunities. Given fish-eating birds current dependence on the Salton Sea (particularly white pelicans), actions taken off-site would not appear to mitigate impacts at the Salton Sea. Mitigation actions either need to be compatible with restoration, or there could be a lag time to allow restoration to move forward (but this should be tied to the salinity increase and the time needed to implement mitigation). The resource agencies asked for the support of all the water agencies in seeing the restoration move forward. IID requested that we stay focused on mitigation, but it should not be in conflict with future restoration. The resource agencies indicated that it would be difficult to justify a 75 year permit for mitigation actions taken for only 9 years. The mitigation also needs to address a substantial portion of the lost use if it cannot address all losses.

We continued the meeting the next day with a discussion of the categorization the resource agencies had developed for the species on the proposed covered species list. Six categories were included: inadequate information, not present based on existing information, transient species with very limited use, other limited use species, species yet to be discussed, and those conceptually included in the HCP. The Service accepted comments from CH2MHill, and copies of the breakdown will be provided to IID staff at the next meeting. We briefly discussed the agenda for the next meeting with the principals from the agencies. We briefly discussed following, and all acknowledged that this would minimize the anticipated impacts. The Service's preference is to avoid and minimize impacts first and mitigate as needed. With that we concluded the meeting.

Staff from the Carlsbad Fish and Wildlife Office attended **the joint State Senate - State Assembly Hearing on the Colorado River Water Use Plan on August 31, 2001**. The hearing began with a statement by the Regional Director of the Bureau of Reclamation Robert Johnson that provided the history of the California 4.4 million acre-foot apportionment. The Interim Surplus Criteria provide 15 years for California to bring its use down below this amount. **There are benchmarks to meet as soon as December 31, 2002**. The Bureau is moving forward with their responsibilities under the NEPA and the ESA relative to their actions that are part of this adjustment. The obstacles that must be overcome were deemed by the Bureau to be less than those already overcome by the water agencies. Questions were raised regarding the restoration of the Salton Sea and its linkage to the water transfer. The document that describes the alternatives for restoration should be released in the next few weeks. Use of conserved water for the Salton Sea is prohibited as part of the restoration. The primary issue facing the California Plan is environmental compliance associated with temporal impacts to the Salton Sea. The California

Endangered Species Act presents particular problems in regards to that statute's requirement that impacts be fully mitigated. The Bureau is aware of the legislative proposals, but it has no position on this approach. The Bureau is tracking other projects that are part of the California Plan including the linings of the All-American and Coachella Canals. Regional Director Johnson stated that progress was being made, but the decree (Arizona vs. California) will be enforced if California does not meet its obligations.

The four water agencies that are party to the QSA (IID, CVWD, MWD, and SDCWA) then provided testimony regarding their commitment to the agreement but concern over the time frame and compliance with the ESA for Salton Sea impacts. They are looking for legislation that will ease the burden of these requirements so that the process may be completed on time. Congressman Calvert who was invited by the State Committees to participate expressed his commitment to work with Congressman Hunter on his proposed Federal legislation, but he is very concerned about the fate of the Salton Sea. Fallowing as a means of conservation needs to be considered, and the community needs to be educated about the role of fallowing in this process. The Senators raised concern that support for State legislation is lacking, and the Administration has not expressed their support. The water agencies re-iterated their position that the legislation was the only way to meet the deadline. They did point out, however, that they are only looking for relief in regards to the Salton Sea. Other aspects of the transfer will be addressed as required by the laws. The Senators encouraged the water agencies to put more effort into pursuing the fallowing option. Beneficial use of the water could be maintained if it were used for soil leaching prior to release to the Salton Sea.

The Interim Surplus Criteria were also addressed in the hearing, but no additional statements were provided by the water agencies. Additional details were provided regarding storage and conjunctive use projects that will assist the municipal districts during times of shortage. MWD is looking at desalination as a potential option in times of drought. The Senators stated that they were looking for support for legislation from the local representatives and the Administration. In the remaining time, testimony was received from the Center for Biological Diversity and the Sierra Club. Both groups expressed their concerns over legislative bypass of endangered species laws and the potential for growth inducing impacts in the receiving areas.

Following the hearing on **August 31, 2001**, a meeting was planned with the Bureau's Regional Director, the Fish and Wildlife Service's acting California-Nevada Operations Manager, and the Principals representing the water agencies. Unfortunately, **the Principals were called away and could not attend**. IID provided the participants with presentations on the hydrological model for the Salton Sea. Some concerns were raised about the assumptions incorporated into the model, but it is considered conservative in that no changes are assumed that aren't reasonably certain to occur. A short discussion of fallowing followed the presentations as a potential minimization measure that would reduce the mitigation requirements. IID also provided a presentation on their mitigation proposal and cost estimates to address the temporal effects to fish-eating birds at the Salton Sea. The basic unit would be 160 acres and 8 feet deep; the cost for the entire network of ponds to be operated for 9 years is \$3.3 - 7.2 billion. The options for the Sea appear to be limited

to what the legislation would provide, the expensive deep water ponds, or fallowing to minimize the impacts. Concerns remain relative to fallowing in that the existing agreement between IID and SDCWA prohibits fallowing, the community does not support it, and the concerns that the water would not be considered to fall under a beneficial use. The cost of the mitigation is not reasonable in IID's view, but the Service committed to re-evaluating the proposal to see if the costs could be reduced. The species list was discussed briefly after the IID and CVWD Principals had returned, and they were encouraged to reconsider the risk associated with several of the species. Of particular concern for coverage are those species for which adequate information is not available for analysis of the impacts. The Service is working towards a defensible species list. IID committed to taking this question to their Board.

The HCP group re-convened on September 4, 2001, to continue the discussion of the Salton Sea. The Bureau of Reclamation was also represented. IID acknowledged the emphasis on fallowing at the Joint Committee and hearing and stated that they needed to determine how to approach this change in direction. CDFG is working on gathering additional data on use of the Salton Sea by fish-eating birds. The San Bernardino County Museum has data from 18 years of surveys at the Salton Sea. We hope that this will provide a better basis for generating the number of birds we need to consider in our analysis. Charlie Pelizza, Senior Biologist at Sonny Bono Salton Sea National Wildlife Refuge, reminded the group that disease issues need to be addressed in any mitigation activities. Botulism is a big problem at the river deltas making these unsuitable locations for mitigation ponds. The ponds need to have adequate flow and drainage characteristics to minimize the botulism risk. We briefly discussed the temporal aspect of the impacts. The Service and CDFG are waiting on legal input in order to provide a resolution on this issue. We discussed the species list and how coverage could be provided for the entire list. The IID Board is not likely to be willing to drop any species. Adaptive elements would have to be developed for each. We also have to consider that it is only reasonable to split the available funding so many ways. Fallowing was discussed, but IID is concerned that it would not reduce the mitigation requirements enough. It is possible to add to the fallowing to free up mitigation water that would bring the changes in the Salton Sea back to baseline. If a credible argument could be presented that the changes with fallowing will be the same as the baseline, no mitigation for fish-eating birds in the Salton Sea would be required. The question associated with this approach was when could they stop doing the mitigation fallowing. It seemed logical that once fish were gone from the Sea, there was no specific benefit to fish-eating birds in continuing this practice. This will also be considered in discussions with the Solicitor. In regards to the 9 year interval, we need to look at worst case (all of the water leaving the basin) if this is an option they want coverage for. We also need to consider the confidence interval around those model results; this increment could possibly be 15 years rather than 9 years. We need to develop an appropriate means to address a temporal impact (9 or 15 years) in a permit that provides take for 75 years. The acreage requirements for an all fallowing approach would be approximately 80,000 acres. Additional fallowing of approximately 30,000 acres will be required for the restoration project. Because IID staff have not been given approval to move forward with fallowing, they have to proceed with the traditional conservation/mitigation approach. They have asked if they could provide mitigation options that would correspond to the different conservation approaches rather

than have a preferred approach in the HCP. This is another issue we will discuss with the Solicitor.

We met again on **September 5, 2001**. The topic of the meeting was scheduled to be tamarisk scrub, but we continued with the discussion of the Salton Sea and species list instead. The Service suggested that they consider the range of model results in developing their mitigation proposal and consider that it will be difficult to permit take for 75 years if the impacts will only occur for 9 years. We agreed that a long term effort makes more sense, but we need to know what is needed for a sustainable population and base the mitigation requirements on that. If fallowing is pursued, we will need to make sure that the strategies developed previously will not be affected. The analysis needs to incorporate these changes in habitat availability, particularly for the burrowing owl. The fallowed acreage would go from an average of 20,000 acres to 80,000 acres. This will likely include both permanent and rotational fallowing. We will also need to consider the possibility of a greater need for things like weed control. The connectivity of pupfish drains also came up, and the Service maintained that the connectivity actions were provided for in the strategy separate from specific impacts of the project to the Salton Sea. IID committed to maintaining this aspect given the "flagship" approach, provided there is adequate space to construct the connections. Mitigation water for the Salton Sea could be routed through the pupfish drains if needed to enhance habitat or improve water quality. The adjacent wetlands should not be affected, and the tamarisk strand along the Sea should be maintained by the availability of shallow subsurface water and the slow shift in the Sea's elevation. In regards to the species list, we need to have a defensible list that provides the resources agencies with assurances that they will be addressed adequately. Given the level of information available for some species, it is not clear that adequate funding will be available nor that appropriate conservation actions can be identified. CH2MHill will continue in their efforts to develop this approach.

We spent part of this meeting with CVWD on their HCP requirements. The Service and CDFG laid out for them what we will need to move forward on developing and HCP for their receipt of the water under the QSA. Several meetings were scheduled. The schedule requirements were not clear as it was not known if their HCP would need to be included in the packet to the State water Resources Control Board (SWRCB). If the time line is the same as IID's, it may be necessary to combine the HCP and NEPA documents with separate incidental take permits and implementing agreements.

On **September 11, 2001**, the group met to discuss tamarisk scrub. We began the meeting with a briefing on several topics including the status of the model 75 year runs. IID anticipates having those available within a week or so. The peer reviews have been requested from the reviewers, but those results are still pending. Thus far, only changes to the documentation have been recommended. The State legislation will not be approved in this session; it is hoped that it will be considered in the special session in January 2002. As a result of a letter from MWD to the Department of Water resources, there was concern about MWD's continued support of the QSA. This contributed to a lack of support for the State legislation which resulted in erosion of some support for Federal legislation. IID is anticipating some changes to the Federal legislation prior to

further consideration. The CVWD issue in regards to their schedule requirements remains, all are hopeful that this can be resolved in the very near future. The IID Board is not open to dropping species from the covered species list unless one of the receiving water agencies is willing to take on responsibility for any future mitigation requirements relative to those species. Discussions on this are expected to continue. The IID Board is open to following as an alternative, but they are not willing to spearhead that effort in the Imperial Valley. They are looking for some other entity to take the lead.

We had a rather lengthy review of the Pufffish strategy relative to the addition of the drains at the north end of the Salton Sea. As a result the doubling of habitat will become its own measure, and the connectivity measure will become part of the Salton Sea strategy but its intent will be maintained. One issue that needs review is the presence of Indian land in the north and how this might limit IID's ability to provide for the needed connectivity. They will review the land ownership in the area. The 5 groups of drains to be connected were identified. We also discussed the need for more specificity in the pufffish study measure including the specific questions that are to be addressed by the study and a justification for taking no action at this time. In regards to moving pufffish out of harm's way for construction projects, we concluded that this requires trained personnel. The resource agencies will assist with the development of this training, and IID will have adequate staff trained to meet their needs under this measure. There was a lengthy discussion as to the appropriateness of developing guidelines for the specific actions to be taken, but concerns were raised that each project may require specific evaluation. It is hoped that coordination with the IT will occur as needed. CH2MHill will attempt to develop language that captures what was discussed.

For the remainder of the meeting we discussed tamarisk scrub. At the outset, IID wanted to distinguish between tamarisk impacted directly by construction activities and that impacted indirectly by the changes in elevation in the Salton Sea. The activities that may result in removal of tamarisk scrub have not been quantified in the document. IID does not anticipate activities in the river flood plains, but they do expect that most of the impacts will be associated with seepage recovery. The resource agencies will require some sort of estimate (at least a range) to cover these activities. We moved on to the strategy, and IID is focusing on the minimization associated with scheduling the activities outside the breeding season. They are still willing to replace native vegetation at 3:1, but they are concerned about the maintenance requirements if they also have to replace the tamarisk with natives. They provided a new approach which was to provide replacement tamarisk at 1:1, but this was not acceptable given that this is a non-native species that the resource agencies would not want to promote. IID also questioned whether there was really an impact associated with the loss of this acreage given how much was available in the Imperial Valley. It did not appear to be appropriate to dismiss this loss given the life of the permit, the number of species involved, and the potential acreage involved (approximately 500 acres). The resource agencies provided IID with a list of potential acquisition sites and were adjourned for the day. We continued the discussion on September 12, 2001. IID is concerned about the cost associated with this approach, and they are looking at a 0.25:1 ratio for acquisition. Such fractional mitigation by acquisition has never been approved in a 10(a) permit in our experience.

All that the Service can support at this time is a 1:1 ratio. We may be able to consider a lower ratio if new habitat is created. IID will consider their options and provide the resource agencies with an approach at a future meeting.

In regards to the tamarisk adjacent to the Salton Sea, IID is proposing to commit to a no net loss approach. IID will monitor the stands and can redirect drain or river flows if necessary to maintain the scrub. This could result in shoreline vegetation ending up some distance from the shoreline, however. IID will evaluate the costs associated with an acquisition approach.

We began our discussion of **agriculture** at the same meeting on **September 12, 2001**. The main focus of IID's approach has been that the project results in the continuation of agriculture in the valley, and this is necessary for any of the habitats to be supported. The resource agencies still need an analysis of the two conservation approaches, however. Traditional conservation will result in construction of facilities or changes in field characteristics that are likely to have very minor impacts. Major shifts to different irrigation practices are not anticipated. The only direct impact that was discussed would result from power line strikes with extensions to lines to power pump-back systems. IID anticipated that most farmers would use diesel engines for this purpose, however. IID is willing to flag new lines to make them more visible. Other small-scale harassment impacts were also discussed. Fallowing poses a different problem. IID agreed to do an analysis of the acreage currently and historically fallowed and how this program would relate to those levels. In addition, we identified some key crops/management practices that should be evaluated in this analysis. These are: acres of alfalfa and acres of alfalfa grazed, acres of Bermuda grass (assuming all is burned as part of that crop's management), and the number of irrigation events that would occur with and without fallowing. This will allow us to evaluate the impacts to species using grazed alfalfa, burned Bermuda grass, and flooded fields preferentially.

A conference call was held between the Carlsbad Fish and Wildlife Office staff, CDFG staff, CDFG counsel, and the Solicitor's Office on September 13, 2001. We discussed the policy questions that had been generated by staff with the assistance of IID previously. Several issues were discussed that were **then reviewed with IID and their counsel by meeting/conference call that afternoon.** The issues discussed and the positions of resource agency legal staff are provided below:

- The HCP can have alternatives, but the Service will only be permitting IID for implementing one of those alternatives. The one permitted will be the least damaging of the feasible alternatives presented. This requires full disclosure of all alternatives presented.
- Mitigation was discussed, and there were concerns over the use of models to determine that impacts would occur only for 9 years when the permit was issued for 75 years. Some alternatives were discussed for approaches to address the continuation of fallowing for make up water:
 - flows to the Salton Sea would be maintained until the fish are gone or for the life of the permit if restoration has maintained the fish in the Sea
 - flows to the Salton Sea would be maintained for the life of the permit

- flows to the Salton Sea would be maintained for the life of the permit with a re-opener if restoration is in place and addressing the problem
- flows to the Salton Sea would be maintained until the fish are gone with a re-opener if restoration is in place and addressing the problem

The Service added that continuing the flows for the life of the permit would be appropriate in the volume necessary to keep the salinity curve at the baseline level given that there are potential impacts to species proposed for coverage that could occur at higher salinities (>60 ppt) as a result of impacts to invertebrate prey items.

- If fallowing is the chosen alternative, the agencies need assurance that the mitigation flows to the Salton Sea will occur even if there aren't enough farmers to fulfill both transfer and mitigation water needs. IID will work with the Bureau of Reclamation to guarantee this water.
- We determined that conditional coverage doesn't really apply to the species for which adequate information is lacking. There may be a mechanism to include those species pending the outcome of future studies, but the resource agencies must be able to remove them from the permit if the information gathered indicates that the HCP is not adequate.
- Temporal impacts are still considered take and need to be mitigated.
- Under the California Endangered Species Act (CESA), the fully mitigated standard requires mitigation actions for the life of the permit. CDFG staff will check to see if spreading the full mitigation that would be required for 9 years over the 75 year life of the permit (65,000 acres for 9 years = 7,800 acres for 75 years?) would be an acceptable approach to address this standard.
- The legislation as currently written seems to require the full paperwork process normally associated with HCPs. IID counsel concurs with this opinion.
- The Solicitor raised concerns about the appropriateness of a separate HCP for CVWD because impacts in CVWD's area would be a direct result of the of receiving water as part of the transfer. IID offered to make completion of their HCP a condition precedent of actual transfer of water to CVWD. The resource agencies will inquire as to whether or not this is adequate to separate the impacts from IID's project.
- The Solicitor was concerned about the nebulous goals of the HCP as currently written.
- Herbicide coverage is not appropriate in the HCP. This activity should be described in the EIS as part of the background, and all use should meet any applicable laws including all label restrictions.
- Minor impacts associated with conventional conservation can be addressed in the permit by limiting permitted take to low levels of non-lethal harassment. This will be provided for specific activities to occur in a specified amount of the HCP area.
- The loss of 500 acres of tamarisk was not considered insignificant and should be mitigated. The resource agencies are looking at the biological value of tamarisk to determine the appropriate ratio.
- The 1600 permit issue with the state has not been resolved and likely will not be resolved in our time frame. CDFG counsel requested that staff consider the requirements of that permit in their evaluation of the drain proposal.
- The Implementing Agreement (IA) needs to be drafted soon, and the Solicitor should

- participate in this process. The draft IA should be circulated with the permit application and HCP.
- Service staff need access to the draft EIS as soon as possible. IID will begin providing portions of the draft as soon as they complete their review.
- Monitoring is key in a HCP that relies heavily on adaptive management. We need to get a framework developed soon.
- Changed circumstances will also need to be addressed in the HCP so we need to schedule that topic.

The Service concluded the meeting with a reminder that we need to see the re-writes of the various strategies as soon as possible.

We began the meeting on **September 21, 2001**, by expanding the number of meetings scheduled into October and November. **It is IID's intention to have a complete re-write of the HCP and a draft of the Implementing Agreement (IA) to the resource agencies on November 2, 2001. Chapters of the EIS/EIR should be available in the very near future.** The State legislation will be deferred until January. It is hoped that progress can be made between the State and interested environmental groups such that the language is acceptable when it is introduced. There will be a hearing on the Hunter bill on the Federal side in October. Given the recent events, however, action on the legislation is not anticipated. The Service was not able to provide any estimates on the pond alternative. We have received partial figures, but no comprehensive cost proposal has been possible to date. CDFG has identified to their legal staff what issues are associated with the mitigation proposals that have been discussed. The resource agencies need to meet at high levels to determine what the policy will be relative to the "fully mitigated" and the "minimized and mitigated to the maximum extent practicable" standards. IID will proceed with the alternative they want to pursue using the estimates that they have developed.

The remainder of the discussion focused on tamarisk scrub. The fourth strategy that was proposed in the draft was dropped because IID did not feel that there would be measurable losses associated with the types of maintenance covered in that strategy. These areas are regularly maintained, and any tamarisk present would be relatively small and scattered. Some adjustments were deemed appropriate to the estimated impacts associated with construction impacts covered in the first strategy, but the general approach was essentially the same. As a result of our discussion regarding timing of impacts versus the mitigation and net loss associated with acquisition, IID proposed the following approach:

- For native trees removed in conjunction with permanent losses, native habitat would be created or acquired at a 3:1 ratio,
- For tamarisk scrub removed in conjunction with permanent losses, native habitat would be created or acquired at a 0.75:1 ratio,
- If tamarisk can be created in advance of the impact, native habitat would be created at a ratio of 0.25:1.

For the seepage community associated with the East Highline canal, the situation is more complex because the vegetation is a mixture of natives and tamarisk. We reviewed that habitat values

provided by Anderson and Ohmart in their study along the Colorado River, and the median value would result in a base replacement ratio of 0.5:1. If the same approach is used, this would result in a replacement ratio of 1.5:1 if creation occurred after the impact or for acquisition. IID was looking for a way to keep this ratio at 1:1, and we suggested that they can present this approach. It would not be consistent with the first strategy, however.

The final category of tamarisk that needs to be addressed is the shoreline strand/adjacent wetland tamarisk scrub. It is not clear if this will be impacted as the Sea recedes or not, so IID is not inclined to do mitigation in advance of any sign of impact. The first requirement is to establish the baseline. For planning purposes, the University of Redlands database is the best information we have on the area that could potentially be impacted. IID is willing to do verification, but they are looking for a cap on their responsibility to mitigate in this category. Given that these figures are likely to be conservative, the database figures may be an adequate cap. The net total of tamarisk may not change in response to the project, in which case no mitigation would be required. If changes associated with a receding Sea occur, they could go in either direction. There could be a net increase in tamarisk, in which case IID would like their obligation relative to the other categories to be reduced. The tamarisk could decrease overall, in which case some mitigation would be needed. Replacing the water is not an option here. If the construction strategy was followed, they would implement replacement with natives at 0.75:1. IID inquired if a survey frequency of every 5 years might be enough to allow for planting of mitigation habitat prior to the actual loss of the tamarisk, in which case a ratio of 0.25:1 could be used. The drop in elevation in the first 5 years is expected to be 1.5 feet. **If a restoration project is implemented, it is IID's position that they do not have an obligation relative to changes associated with elevation of the Sea.** We briefly discussed monitoring and tamarisk as the final topic of the day. IID is willing to conduct baseline surveys of the tamarisk itself and to monitor any created habitat to assure that it meets the success criteria, but **they are not willing to monitor for covered species in the tamarisk or the created/acquired habitat because the mitigation is out of kind.** It is their position that meaningful comparisons could not be made. They suggested that the resource agencies monitor the created/acquired habitat given that this mitigation was their requirement.

The group met again on **September 24, 2001**. At this meeting we discussed a variety of topics. We began by looking at photographs of the seepage area along the East Highline canal and discussing mitigation of impacts in this area. We discussed the ratios for tamarisk and the mixed tamarisk/native stands along the canal. The value assigned to the mixed stands was a base replacement with natives of 0.5:1. This is based on the median value for mixed types in the Anderson and Ohmart 1984 study used previously in the canal lining projects. If mitigation is created up front (3 years from planned removal was acceptable to IID), the ratios would be **0.25:1** for replacing pure tamarisk with natives and **0.5:1** for replacing mixed stands with natives. If creation is not done up front or if habitat is acquired for preservation, the ratios will be **0.75:1** and **1.5:1**, respectively. The factor of three helps to offset the temporal loss of habitat associated with after the fact creation or the net loss associated with acquisition.

We spent the remainder of this meeting reviewing the monitoring approaches that have been proposed. The **burrowing owl** approach is acceptable; we are waiting for feedback on the length of the demographic study (somewhere between 12 and 15 years) and the number of nests that will need to be monitored to have acceptable confidence in our results. The **drain** monitoring calls for monitoring of vegetation (relative to the success criteria) and Yuma clapper rails only. The Service suggested that some verification of use by other covered species should also be included. IID agreed to note other covered species seen in the course of the clapper rail surveys. The outstanding issues associated with the **desert** monitoring are the success criteria to be used in revegetation and the incorporation of Couch's spadefoot toad surveys in response to thunderstorm activity in the appropriate habitat. The **desert pupfish** monitoring will require an accounting of the linear distance of drain available to them. IID already has figures for the drains in their current condition. Selenium will be monitored in the drains. There will be funds available to look at operations and maintenance procedures to identify minimization measures. No surveys are planned for the pupfish themselves. **Tamarisk scrub** monitoring will include monitoring of the condition of shoreline strand and adjacent stands. There will be monitoring of any created vegetation, and covered species surveys will be conducted prior to construction to avoid taking nests. No general covered species surveys are planned. **Salton Sea** was problematic in that it is difficult to assure that the make-up water is returning conditions to baseline. Such calculations are really only possible if all conservation is done by fallowing. Make-up water would not appear to work as a minimization measure under any other scenario, and it would only be used to address salinity (not elevation issues). Deep water ponds for mitigation would need to meet production criteria, and we would want to look at bird use. We explored the possibility of mixing alternatives temporally rather than spatially (fallow until the fish are gone, then install conventional conservation). IID may pursue this alternative.

On **September 25, 2001**, we met again and review some of the discussion from the previous day's meeting. We began with the Salton Sea strategy addressing **shoreline strand and adjacent tamarisk scrub**. The resource agencies and IID disagreed over the term of replacement habitat management. This is generally done in perpetuity, but IID is looking to implement this for the life of the permit. A monitoring methodology will need to be developed prior to permitting that will provide for an adequate ability to detect change. The resource agencies will also require an outline of the management actions that will be required to implement this strategy. IID is willing to conduct the vegetation monitoring to assure success, but they do not see the need to conduct covered species surveys given the mitigation is "out of kind". Some verification of effectiveness will be required by the Service, and there will be presence data for comparison from the baseline surveys. IID was concerned that not finding covered species would re-open the permit, and the Service suggested that some surrogate(s) species be used to demonstrate that the created habitat was providing for the desired functions and values. IID will develop language to lay out the goals and objectives in habitat terms. The length of the tamarisk monitoring does include the 95% confidence interval. In regards to how to define what mitigation is considered "prior to" the impact, the Service recommended that the definition be based on vegetation characteristics rather than a specific time. Three years was believed to be a reasonable estimate of the advanced planning that will be required, but a tree height/crown diameter or

similar measure would provide a better criterion. This definition may be different for losses from construction (sudden) versus losses from a receding shoreline (gradual).

We also discussed the **Salton Sea mitigation**. IID is planning on putting the 65,000 acres of fish ponds forward as one of their alternatives given the resource agencies have not really given them an indication that less than full mitigation will be accepted. IID has also taken the position that make up water should not be required for fallowing, fallowing provides adequate minimization on its own. IID is also not intending to proceed with any actions in the Salton Sea if a restoration project is authorized. IID is planning to develop a set of strategies that would address the range of impacts that would be associated with conventional conservation, fallowing for conservation, and a combination of both given that the IID Board may allow for some fallowing provided there is a cap. We briefly discussed some of the problems associated with a hatchery to put fish into the Salton Sea.

The Service Staff left that meeting to participate in a conference call (also **September 25, 2001**) between the California-Nevada Operations Office and the water agency Principals. The options they were discussing were deep water ponds for fish, legislation, and fallowing/shallow water ponds. Fallowing substantially reduces the impacts of the water transfer on the Salton Sea, and these could be avoided all together with the addition of make-up water. Water could come from fallowing or some other source, but the duration of the make up water is still being discussed. The Principals were concerned that there needed to be another alternative in case fallowing cannot be implemented in the Imperial Valley. The Bureau of Reclamation suggested that make-up water could be purchased. The Service sees getting us back to baseline as the most logical and least vulnerable way to offset the impacts. We have to permit the least damaging practicable alternative. We are looking for a second alternative, but it must be feasible and meet the Federal and State permit requirements. We discussed a hatchery and dikes around the river mouths, but both of these present additional problems. We also discussed identifying a dollar figure for mitigation, but there must be identifiable actions that will offset the impacts that can be implemented with those funds if a permit is to be issued. The water agencies have concerns that the Endangered Species Act just cannot accommodate their project needs. MWD also raised the requirements of California Environmental Quality Act (CEQA) as being significant as well. They offered a suggestion that the transfer be allowed to ramp up to 100,000 acre-feet while data is collected, and the mitigation will be determined after those studies. Given that fallowing has been implemented in other areas, IID will have to provide justification for not pursuing it in this case. The Bureau of Reclamation questioned if there was a jeopardy involved, but that issue is not the primary one. Without mitigation for impacts to fish-eating birds, the HCP does not meet the permit issuance criteria. IID raised concerns that there will not be broad support for the restoration outside the state unless this transfer moves forward. However, fallowing is an alternative that is compatible with restoration. The water agencies will need the second alternative in two weeks when the legislation is the subject of a Congressional hearing.

The group re-convened on **September 26, 2001**, to discuss the HCP IT. We began by laying out some of the responsibilities of the group. There will be a need for a dispute resolution process.

IID's counsel agreed to provide examples. The Service reminded the group that we cannot abrogate our responsibilities to a voting group. Where decisions focus on permit conditions, the agencies make determinations independently. The suggestion was made that the IT be allowed to function, but the agencies will be given veto authority as long as it is exercised in a timely manner (60 days). The IT will need to formally document their discussions and decisions. CH2MHill will develop a table of all of the measures that provides the specific actions, time lines, and where IT input/action will be required for planning purposes. We also revisited the topic of agriculture as a habitat. The HCP will need to describe the nature and extent of any anticipated impacts. This could be done on a unit system for conventional conservation then estimates of impacts valley-wide could be derived. Specific crops should be discussed in the following alternative focusing on anticipated changes in grazed alfalfa and burned Bermuda grass as these are very important to the mountain plover. Special attention should also be given to the needs of the gull-billed tern given its dependence on agricultural lands for foraging. Nesting habitat needs should also be addressed. Lastly, the monitoring write-up needs to clearly state the goals, objectives, quantifiable measurements that will be taken, and the trigger points for adaptive management. CH2MHill will develop this as appropriate for the habitat being discussed. They see some areas as requiring no monitoring, others will only require compliance monitoring, and still others will require both compliance and effectiveness monitoring. A revised HCP is due to the agencies on **November 2, 2001**.

Staffs from the California-Nevada Operations Office (CNO) and the Carlsbad Fish and Wildlife Office traveled to Washington, DC to provide a briefing to the Acting Director and some of his staff on **September 28, 2001**. The Regional Director of the Bureau of Reclamation's Lower Colorado River Region was present to provide an overview of the history of and agreements involved with the use of Colorado River water in California. While Acting Director Jones' time was very limited, staff was able to relay information on the resources of concern at the Salton Sea. The briefing continued with the Assistant Director for Endangered Species, and we discussed whether the project should fall under section 7 or section 10. A federal nexus exists in the Secretary's approval of the change in point of diversion and the agreements involved in the QSA. Use of section 10 permitting was at IID's request. We discussed the possibility of having two alternatives in the HCP. The following approach minimizes impacts, whereas conventional conservation would require a significant mitigation component. Outstanding issues include participation by CVWD for impacts associated with receiving the water, tribal trust interests have not been addressed, and impacts to the Refuge have not been addressed.

A conference call was held between the Service and the Bureau of Reclamation on **October 9, 2001**. The main topic of the call was **addressing impacts of the water transfer on Salton Sea species through section 7 versus section 10** of the Endangered Species Act. It was determined that a section 7 consultation is feasible given the Federal Approval that it required, and it would involve re-initiating the consultation conducted by the Phoenix Fish and Wildlife Office based on the change in geographical extent of the analysis. This re-initiation would only address the impacts to Salton Sea species and would not include the other species/habitats to be addressed in the HCP. The Bureau sees this as a one-time action that would not likely have a trigger for re-

initiation in the future. A future listing of the white pelican is one issue they hoped to be able to address in the future if the need arises. Consideration of the CVWD portion would be facilitated by conducting a consultation on the Salton Sea as part of this process. The direct impacts from increased flows in CVWD's area could also be distinguished from the growth facilitating aspects of receiving additional water. The greater concern for the Service was that IID may not have an incentive to follow through on the remainder of the HCP if the Salton Sea species are addressed through section 7 consultation with the Bureau. The Bureau assured the Service that they intend to see IID complete the HCP for their operational area. The Bureau is trying to find a balance between reducing impacts to the Salton Sea species and reducing the requirements of the current process. Given the magnitude of the problem, we will ultimately have to rely on the Restoration Project. It is not clear if fallowing will still be considered an alternative in the section 7 scenario. This alternative does minimize the impacts of the project, but it is not popular in the Imperial Valley. The farmers themselves may be more supportive of this alternative, however. We discussed a tentative approach that might be workable. However, the Service recommended that we defer on the section 7 process until after the draft EIR/EIS and HCP have been released for public comment. This would provide feedback on the fallowing alternative and whether or not it is feasible to pursue at this time. The alternative to fallowing in the HCP should include mitigation that IID and the other water agencies are willing and able to implement. We discussed matching mitigation options to the project alternatives. The species list will likely have to be reduced under any circumstances, but we discussed the possibility of developing a conservation fund to address unlisted species that would not be addressed under a section 7 scenario. **The Regional Director from the Bureau of Reclamation and the CNO Manager will be meeting with the water agency Principals to discuss these issues on October 12, 2001.**

Following the meeting on **October 12, 2001**, between the Principals and the Department of the Interior, a conference call was held to discuss with staffs the outcome of the meeting. The focus was on the Salton Sea as the other aspects are believed to be achievable under the HCP scenario. The group is looking for an administrative solution, and much discussion focused on whether section 7 or section 10 of the ESA offered the most logical, feasible approach. The water agencies were concerned that they would be held responsible for the restoration when their impacts are only temporal. Use of the Salton Sea beyond its designation as an agricultural repository should be the responsibility of the government. One problem has been the lack of a feasible mitigation alternative. Those described to date have not been adequately cost effective. Under either approach, the Bureau of Reclamation sees a need to reduce the list of species we are dealing with in the process. However, there aren't that many fish eating birds that use the Sea, but they occur in large numbers. IID saw the section 7 approach as including too much risk given that re-initiation could result in more requirements for them. IID is willing to consider a mitigation alternative, but they stated that more direction was required from the resource agencies as to what the agencies would accept as mitigation. One approach that was raised was the implementation of the on-site enhancements in combination with a conservation fund for white pelicans. It was not clear what the conservation fund would be used for nor what amount would be needed. The Bureau of Reclamation is open to the section 7 approach, but the Bureau is not able to assume all future risk. Finally, the water agencies asked if the project could conserve by

fallowing until all the fish are gone then convert to conventional conservation. There are other potential impacts that should be considered, however, given that this would not bring the project to baseline for the entire permit duration. The Service would not require actions beyond returning the Sea to the baseline condition. We will continue to work with our partners on the restoration for long-term actions to provide for white pelican use.

The working group re-convened on **October 17, 2001**. The Service began the discussion by reiterating that we need a mitigation alternative that the water agencies can implement in the HCP rather than the 65,000 acre alternative that is not manageable. CDFG is working on an approach that will meet their requirements. IID is still considering the concept of fallowing for the project until the fish are gone then converting to conventional conservation. The alternatives in the HCP document may or may not include make-up water depending on the feedback they receive from their attorneys. The Service and CDFG will get together to discuss bringing the two agencies' ideas together into something that can be shared with IID soon. IID is very anxious to receive this feedback; they consider the 65,000 acre option to be a placeholder until something more reasonable can be developed. IID provided an update of their review of the University of Redlands database on adjacent wetlands. Most of these areas are actually managed or will continue to receive water and are not expected to change with the project so this strategy will be dropped from the HCP. **Hard copies of Chapters 1 and 2 from the HCP and the Biological Resources section from the Draft EIR/EIS were provided by CH2MHill.**

The main topic of discussion was **changed and unforeseen circumstances**. CH2MHill has looked at the frequency and magnitude of earthquakes and feels that a magnitude 6.7 quake is the maximum magnitude that is foreseeable in the permit term. The HCP will consider changes associated with this magnitude quake or smaller relative to actions that would be required for the habitats covered in the permit. Of most concern was maintaining delivery of water to the managed marsh. IID felt that this size quake would not so impact their system that deliveries would be precluded. They will consider the managed wetlands to be highest in the priority for water delivery. Other circumstances that need to be considered for the managed wetlands are drought (reducing the water available), invasive species, hazardous materials incidents, flooding/tropical storms, and wildlife disease. In regards to this last issue, we recommended that IID be added to the communication system already developed to respond to wildlife disease incidents. Aquatic weeds could be especially problematic and should be monitored to promote early control. Fire is a concern in the desert habitat, particularly for any areas restored or preserved as mitigation. It appears that most changed circumstances apply more to created/preserved habitats than the avoidance measures provided for most strategies. The Service encouraged CH2MHill to use language directly from the regulations in describing the distinction between changed and unforeseen circumstances. They are no longer considering a percentage difference from the hydrological model as a criterion, and a new approach is being developed that will consider Colorado River quality. For each changed circumstance there will need to be a quantifiable trigger and a response action associated with it. Changes to the species status as well as changes to the habitats need to be addressed.

The burrowing owl strategy is already designed to deal with adaptive management, so IID will need to define what they see as an unforeseen circumstance based on the funding limit on this strategy. Given that a rise in the elevation of the Salton Sea is not foreseen by any of the models, this would be an unforeseen circumstance relative to the measures developed for desert pupfish habitat and connectivity. If this occurs as a result of restoration, the restoration project would be obligated to address any problems. The connections should be located such there is some flexibility to accommodate elevation changes. We need to define in the HCP what water quality changes are change circumstances for the pupfish and will be addressed versus those that are unforeseen. Besides water quality, impacts could occur to pupfish as a result of new exotic fish being introduced, fish disease (e.g., Asian tapeworm), and flooding affecting the drain cleaning frequency. Some basic level of surveys will be required in order to respond to any changed circumstances. To address the potential impacts of pupfish being washed out of the natural tributaries by floods into a Sea that was no longer suitable, it was suggested that IID could set up new refugium populations for those sites. This would be limited if a restoration project is put in place, and it may involve one of the agencies taking on the management of the pond.

The Service Carlsbad staff had a conference call with staff and the Regional Director from CDFG on **October 18, 2001**. The discussion focused on finding a mitigation alternative that could be implemented by phasing a combined hatchery and pond approach. The concept would be to begin by raising fish to stock the Sea once reproduction had ceased but while adults could still survive. As the survival salinity tolerance was reached, the pond construction would be implemented to provide habitat to maintain fish eating birds. The acreage of ponds is based on a temporal impact that is mitigated over the life of the permit. If restoration is implemented during the course of this phased process, funding would be redirected to support the restoration project instead. The basics of this proposal will be presented to IID at our next meeting.

The working group re-convened on **October 19, 2001**. We received a brief update on the meeting between the California Resources Agency and several environmental groups. The focus of that meeting was the California fully protected species. Some progress on that issue was made relative to the Salton Sea and lower Colorado River projects. A brief discussion of the two economics studies being developed by the Bureau and IID occurred. The primary difference is in the assumptions incorporated into the studies. It has not been possible to directly compare the results of the studies to date. The Service raised the issue of addressing tribal water rights. These issue are also depending on the QSA for resolution. The San Luis Rey tribes are to receive their water from conservation resulting from the canal linings.

The remainder of the meeting was focused on the Service and CDFG mitigation proposal. This included the basics of the proposal, how funding could be redirected to restoration if that moves forward, and other actions that should be carried out to minimize impacts to the Salton Sea. Following with make up water continues to provide the preferred approach by avoiding impacts to the Salton Sea, but the mitigation was designed to address the temporal impacts caused by the project on a scale that can be implemented and that would be maintained for the life of the permit. Staff from the Sonny Bono Salton Sea National Wildlife Refuge raised concerns about the wildlife

benefits that would not be maintained at the Sea by this approach. While these concerns are valid, a smaller scale long-term project was deemed preferable to a short-term full scale project. The resource agencies have the option to continue management of the ponds after the permit term has ended. Specific trigger points will be developed that define where funding will be directed based on conditions in the Sea and progress on the restoration project. The Service is focused on addressing fish-eating bird impacts; CDFG would also like to see the loss of the sport fishery addressed by stocking hatchery fish in the Sea. We will also need to address changed circumstances that would apply to the hatchery/ponds. The full scale 65,000 acre option will be moved to alternatives considered but not carried forward. CDFG and the Service will continue to gather information to assist IID in developing cost estimates for the hatchery. Information as to the scale of the facility required is lacking as are operation and maintenance requirements. It is hope that some progress can be made on this effort in the next week. Refuge staff reminded the group that adequate water, labor, and other long term management requirements should be factored into the costs.

On November 2, 2001, the Service received three copies of the new administrative draft HCP via Federal Express shipment. However, the shipment did not include a draft of the Implementing Agreement as expected nor did it include any additional sections of the draft EIR/EIS.

The resource agencies and IID met on November 13-16, 2001. The purpose of this meeting was for the resource agencies to go through the new draft of the HCP and provide their comments to IID. Over the course of the four days, the group was able to go through the first four chapters of the HCP. The HCP did not include the new Salton Sea model results that were updated based on: new figures for salt coming in from Mexico, inflows from the drains that discharge directly to the Salton Sea, and the updated figures for salt precipitation. We briefly discussed the schedule, then went on with our page by page review. We discussed duck clubs and refuges in regards to water rationing. IID is willing to consider guaranteeing water to the State and Federal Refuges as part of the HCP. They determined that the coverage of duck clubs would be dropped. IID was reminded that other activities for the EIR/EIS need to be consistent with their commitments in the HCP. The Service suggested that they include an Executive Summary in the HCP. One aspect which came up in regards to several strategies was the interim period between issuance of the permit and implementing the actions called for in the HCP. IID committed to providing interim staffing of the biologist position, but there may be additional actions required to address this period for some of the strategies. We discussed that the HCP IT should not be a substitute for actions that should be provided in the HCP and that it cannot abrogate any resource agency responsibilities. The Salton Sea analysis needs to include an analysis for each of the covered species listed for that habitat. We discussed the role of the Restoration Program, and IID decided that they would prefer to address this program in a separate section in Chapter 1 rather than try to incorporate discussions throughout the document.

Some additional issues that came up in the discussion include the need for standard language to address conservation easements. We need to define the criteria that allow habitat creation to be considered advance mitigation so the lower ratios can be used. The implementation of measures

for the term of the permit rather than in perpetuity is also an issue that needs to be resolved. IID agreed to discuss the other Salton Sea projects put forth by CVWD and the Pacific Institute in their discussion in the EIR/EIS. What is still lacking in the HCP is a discussion of alternatives to the takings and why they can't be implemented. This includes fallowing for make-up water under the fallowing alternative. In the discussion of the Salton Sea, the question was raised as to whether we have a palatable alternative among the three presented. Given that a demonstrated ability to provide funding is necessary for the permit, we will need to address this issue. The individual species analyses throughout the document need to be checked for consistency, and the document should not overstate benefits and de-emphasize impacts. The lack of detail in the current monitoring and adaptive management plan is still a problem. We need more definitive information on how emergencies will be handled and how they could affect covered species. The Service provided a copy of the Regional Office's preliminary comments. This included the need to reconsider their approach on changed versus unforeseen circumstances as right now most of the potential events are in the latter category. The last problem discussed was that it could be difficult to reconcile one set of alternatives in the EIR/EIS with another set in the HCP. This will need to be resolved. A list of action items was developed, and the group adjourned.

Following the morning HCP meeting on November 16, 2001, a meeting was held between IID and engineers representing CDFG and the Department of Water Resources (DWR). In response to IID's cost estimates for the 5,000 acre pond/hatchery option, CDFG had developed its own estimate for the ponds based on an above-ground approach rather than an in-ground approach as was included in IID's estimate. CDFG's initial cost estimate was on the order of \$10 million dollars for construction of the ponds only. IID was concerned that the two proposals were not equivalent and therefore their costs could not be compared. IID provided several concerns to CDFG staff that were then forwarded to the CDFG engineering staff. The objective in both cases was to get a "pre-feasibility" cost estimate to use in discussions between the water agencies and the resource agencies. There were many aspects of IID's cost estimate or that IID deemed appropriate for the CDFG proposal that were not initially included in the CDFG estimate such as land costs, water costs, armoring on the levees, and pumping costs. The group discussed the need for land costs to be covered if IID owns the land (it is a joint project, and IID should receive credit for this contribution), the difference in water costs associated with use of agricultural fields (has a history of use so water should be available at the agricultural rate) vs. water costs with reclaimed Salton Sea bed (water would have to be conserved to be made available and therefore would cost the conserved water price), and maintenance of a gravity-flow (in-ground) vs. a pumped flow (above-ground) approach. Water delivery costs could be higher if the delivery exceeds the design rate of the IID facilities. The use of drain water was discussed as a cost cutting measure, but this would require additional monitoring and may require blending of delivery and drain water to maintain the appropriate water quality. Additional infrastructure would be required to accommodate this.

As a result of including costs for most of the items included in the IID estimate, the CDFG pre-feasibility estimate was approximately \$175 million for construction and maintenance of the ponds (the associated hatchery costs would be extra). The IID cost estimates, which included estimates

of the hatchery costs, ranged from \$350-800 million. On the low end, the estimates now differ by a factor of 2 rather than a factor of 35.

The group met again on **December 14, 2001**, to discuss the preliminary draft EIR/EIS. We started with a discussion of the schedule for the document and the public hearings. Three public hearings are planned. One issue of concern was the intention to address comments given orally at hearings a general response whereas the Service has always considered oral and written comments to be equal warranting specific responses to both. We continued with global comments on the document. CDFG stated that as their CEQA compliance for the 2081 permit, the document will need to describe the take with species specific discussions that link the potential take with the HCP actions. The HCP alternatives should also be separated from the project alternatives. Operations and maintenance are not describe under any of the alternatives but need to be if we are to use this document as CEQA or NEPA compliance for the permitting of take associated with these actions. The HCP alternatives need to include an alternative to the take. The No Project still includes operations and maintenance and thus would not be equivalent to a "no take" alternative. CDFG stated that the document does need to address fully protected species, and more work is required to analyze the impacts to the sport fishery and socioeconomic aspects of the sport fishery. The document needs to clearly state the purpose and need for the Service in addition to that for IID and the Bureau. The water quality section should be consistent in its use of Salton Sea modeling results, and the assumptions incorporated into the drain water quality modeling should be clearly stated so that the reader can understand such results as the selenium concentrations under all alternatives and the baseline decreasing over recent sampling results.

We discussed the various alternatives for the Salton Sea provided in the Technical Memorandum included with the document. After some discussion it was agreed that the "Risk Sharing" alternative was a funding mechanism rather than mitigation for the Salton Sea and should not be included in the Salton Sea alternatives. The tri-delta alternative is going to be addressed as an alternative considered but not carried forward so that it is at least discussed within the document. IID did not want to delete the 65,000 acres of ponds, but they are willing to use this discussion to guide the reader through the calculations that resulted in the 5,000 acre option. The second Salton Sea alternative will be following. IID is concerned that they will not be able to provide a project level evaluation for these alternatives and may need a supplemental document. It was decided to proceed with the most thorough discussion possible and address the need for a supplemental document in the future. We also discussed the need for a more thorough evaluation of the interaction between the water transfer and the Salton Sea Restoration Project. The Bureau should be able to provide information on changes in the scale of restoration even though the Alternatives document has not been released.

CDFG staff from Blythe joined to discuss the lower Colorado River sections. They had only received a copy of the document on **December 13**, but they had many concerns about it. The document did not incorporate a discussion of measures to comply with the Fish Screening Policy. This is needed to address the take of fully protected species. The change in point of diversion does trigger the need to address this issue. CDFG also felt that issues that had been discussed

previously with SDCWA and MWD had not been incorporated into the project as they had anticipated. The biological opinion developed by the Service's Phoenix Fish and Wildlife Office does address some of the impacts to LCR species, but CDFG does not believe it reduces the impact to below the level of significant. The EIR should address sensitive species as well as those that are required to be addressed under CESA. Their conclusion was that in its current form, the document would not be adequate for CEQA coverage of permit issuance for the LCR species.

On December 17, 2001, the Bureau held a conference call to discuss the EIR/EIS, and the Service was invited to participate. The Bureau's Regional Office did not want the 65,000 acre pond alternative to be discussed in the document. The Bureau's technical staff was concerned about the assumption incorporated into the model that CVWD would get 100,000 acre-feet/year of water even without a transfer from IID. CVWD has stated that they would seek this additional water out should it not be available from IID, but the Service questioned whether that was adequate to consider such volumes to CVWD reasonably certain to occur. Some of the Indian tribes are concerned about power generation losses and various other trust assets. The Bureau is planning on developing this part of the document. Section 1.8 also needs to document the consultation that has been conducted with the Tribes. Consultation on the HCP is still pending. The Service and the Bureau will make an effort to address this issue during the public comment period.

A lengthy discussion ensued over the economic analysis in the document. The Bureau's economist was concerned that the document only portrayed a worst case scenario rather than providing a more modest scenario for job loss based on fallowing of hay crops. This is a very important issue to the Bureau's Regional Director.

The Service raised several issues of concern. A determination of less than significant is not the same as significant but mitigable. These are different and should be portrayed as such in the text and summary tables. There needs to be an alternative to the takings, but the proposed listed species only alternative is problematic. The Bureau would like to see this maintained as a place holder for the section 7 option. The Service would prefer to see a reduced species list for the HCP as we may not be able to permit take of the 25 species that are lacking good information. Transfer volumes are project alternatives rather than HCP alternatives as IID has never offered to reduce their conservation volumes as part of the HCP negotiations. Impacts of permit issuance and HCP implementation should be analyzed in every topic area within the document. This includes economic impacts of fallowing for mitigation water and taking 5,000 acres out of production for ponds. Overall the Service is concerned with the lack of time for a thorough review and the lack of a final review of all changes in the HCP document.

The group agreed that a minimum of two months would be needed for a thorough update and review of the EIR/EIS and HCP. The Bureau acknowledged that the State Water Resources Control Board (SWRCB) petition schedule would not accommodate that kind of delay. Given the schedule we are likely to have many issues to be resolved in the final document. The Service would like to work with the Bureau on presentations for the public hearings.

A second conference call was held on **December 18, 2001**, that included the Bureau, the Service, IID and CH2MHill. All agreed that the 65,000 acres of ponds should not be a formal alternative, but IID was not willing to remove it from the document altogether. It will be included as background information for the 5,000 acre pond alternative. This alternative will be addressed programmatically given that many details have yet to be worked out. The Bureau wanted to maintain flexibility in how it would be implemented given that the water requirements are substantial. Supplemental assessment of this aspect could result in future delays.

We discussed the need to address the difference between SDCWA and CVWD getting the water, but IID stated that they were using this assumption based on CVWD's position that they will obtain the water from some source. Most of the differences occur after fish are no longer expected to be present in the Salton Sea. The Bureau reminded IID and CH2MHill that the assumptions must be clearly stated so the reader will know what these assumptions are. It would be prudent to be prepared to provide the modeling without this assumption in the Final EIR/EIS given that we don't have a worst case depiction of the Salton Sea under the proposed project without it.

The Service will have our Regional Tribal liaison begin consultation during the public review period with the Indian tribes that may be affected by the HCP. The Service normally addresses the National Historic Preservation Act as well, but this does not appear to be an issue in this case.

The Bureau was very concerned about the lack of evaluation of the fallowing of hay crops only in the socioeconomic analysis. IID countered that they are not going to require growers of specific crops to fallow; the program would be open to all farmers that are interested in volunteering for the program. They have provided the entire range of economic impacts from job gains through construction of water conservation measures to the jobs lost through fallowing of crops in proportion to their production. The Bureau was concerned about inconsistencies between the water transfer and the Restoration Project, but their plan calls for the purchase and conversion of land to solar ponds. They do have the ability to limit the lands considered. IID agreed that it was likely that the least valuable crop would be fallowed, but this is dependent on market conditions. It may not be hay crops that would be considered the least valuable. It was suggested that the discussion focus on the voluntary nature of the program.

We discussed the conclusions provided in the Biological Resources table and the fact that they did not appear to be consistent with the text. CH2MHill staff stated that this issue had been addressed in the updated version. The lack of significance attached to the loss of the fishery as a non-native fishery will be reconsidered.

The HCP alternatives have been modified, and the listed species only alternative is out. The alternatives for the HCP are now the same as the project alternatives. The Service reminded the participants that a "no take" alternative is required, and CH2MHill stated that they would attempt to address this issue in the draft that goes out. Each alternative will have two approaches for addressing impacts to the Salton Sea: ponds and mitigation water. Make up water could come

from fallowing or additional water conservation. The socioeconomic analysis will incorporate the amount of fallowing required for this option. All sections have the HCP impacts incorporated.

The Service relayed concerns that CDFG had expressed at our meeting. IID stated that SDCWA and MWD are working with CDFG to resolve the LCR issues. The species specific analysis of take will not be possible in the draft, and they are working on having that in place for the final document. It was made clear that the Bureau will develop any additional documentation required to implement the LCR conservation measures, and SDCWA and MWD will provide the funding.

We discussed the need to use a baseline that incorporates those actions that will occur on the LCR both in that model and in that input into the Imperial Valley and Salton Sea models. Comparison to existing conditions given the changes that are anticipated is deemed inappropriate by the Bureau.

CH2MHill has identified two additional significant, unavoidable impacts in their analysis. There will be significant, unavoidable impacts to Farmland of Statewide Importance under the fallowing scenario given that rotations of 4 years or more is considered to be conversion under that designation. This does, however, provide IID with the maximum amount of flexibility in implementing the program. No zoning changes are anticipated at this time. They have also identified a significant, unavoidable impact to air quality as a result of fugitive dust from exposed seabed of the Salton Sea. While this is a conservative designation, it is necessary given there are no data to support that such impacts will not occur. No mitigation for this impact has been identified.

Following the conference call on **December 18, 2001**, the Service had a brief discussion with IID on the modifications to the language in Pupfish Strategy 2 that we had recommended to avoid a potential jeopardy for the desert pupfish as a result of selenium contamination. IID expressed the concern that the language seemed to require them to carry out actions before it was demonstrated that there was a problem. The required 4-day average sampling has not been performed. IID provided some changes to the language by close of business that day. On **December 19, 2001**, the Service provided some minor modifications, but the extension of implementation from 5 years to 7 years was maintained. IID responded that while the changes were minor, CH2MHill was no longer accepting changes to the HCP. This will have to be addressed in the final document.

The group re-convened for a two-day session on **January 17 & 18, 2002**. The wildlife agencies acknowledged that both will likely need to provide official comments on the EIR/EIS to assure that our concerns are recognized and addressed. We discussed the need to receive a permit application and what must be included in the package: the HCP, the IA, the monitoring plan, and the actual application itself. This must all be available for public review at some point. We discussed the additional steps associated with processing the permit on the Service's part: an internal consultation and biological opinion, findings, the Incidental Take Permit, and a Record of Decision (ROD). Frequently, the findings, permit and ROD are all signed concurrently. We discussed the necessity of separating the CEQA and NEPA processes given the ROD will not be

completed until late in the process but the State Water Resources Control Board (SWRCB) process will require a Notice of Determination (NOD) much sooner. We discussed the need to reconsider the decision to keep the 25 species for which adequate information is not available on the covered species list. It will require additional work to retain each of these species, and it is not likely that we will be able to provide coverage for these species in the permit. Withdrawal of these species could be incorporated into the Final EIS and HCP documents.

Lianne Ball of the Service's staff gave an introductory presentation on monitoring and adaptive management. She provided a set of definitions that can be used as we continue our discussion of monitoring topics. The monitoring program should be more than just counting individuals. Our goals should drive the development of specific monitoring questions that are then addressed through hypothesis testing. Adaptive management requires that alternate hypotheses be evaluated followed by implementation of the most effective management technique.

We then began a discussion of the drain monitoring in the context of the presentation. CH2MHill provided a flow chart to represent the process for monitoring the created marsh habitat. Although we had agreed to focus on the clapper rail as our "flagship" species in this habitat, we agreed that we should not lose sight of the fact that we are proposing coverage for other species as well. We should consider their needs in developing the creation and management plan for this HCP component. Additional baseline surveys were added for years 7 and 12 to provide for the adaptation of the Phase 2 and 3 designs to up-to-date mitigation needs. The discussion then focused on effectiveness monitoring and how the results of the surveys would be used. Given the differences between the drains and the created habitat, there was some concern over our ability to directly compare between them and set numeric goals based on the baseline surveys. One possibility is to compare surveys of the created habitat to covered species numbers/densities (particularly Yuma clapper rail) on the State and Federal refuges. Compliance monitoring will be needed to demonstrate that IID has met its commitments in terms of the acreage, type and structure of the habitat created. Performance standards for the vegetation will be developed as part of the creation and management plan. These will result in more discrete parameters that can be measured. IID is not comfortable with a numerical goal for any of the covered species, so the group developed a set of parameters that the IT will consider in evaluating the results of the surveys. We identified the need for IID to state what parameters they are willing to adjust as part of adaptive management and what parameters would be the responsibility of the wildlife agencies (under the No Surprises Policy) if future changes were deemed necessary. That information will be provided prior to our next meeting.

We briefly discussed the addition of coverage for entrainment of Colorado River fish (razorback sucker in particular) to the HCP and permits. IID recently learned that this take was not covered by the existing biological opinions between the Service and the Bureau for the lower Colorado River. This is a new aspect that was not addressed. The Service will have to discuss this with the Phoenix Fish and Wildlife Office as they are the lead on lower Colorado River issues.

We discussed monitoring needs for the razorback sucker. This discussion was exclusive of the issue of entrainment. A conservation strategy has been proposed for this species relative to the main delivery canals and associated reservoirs only. The approach is to collect, transport, and release to the Colorado River any razorback suckers found in the course of drawing down the main canals or reservoirs. The monitoring will address fish survival through the collection and transport to the Colorado River. Long-term survival will not be monitored as part of the HCP.

We began a discussion of the tamarisk scrub monitoring. This has some similarities to the drain/marsh monitoring given that the created habitat will differ from the impacted habitat. In this case the structure and the species composition will vary as a result of the requirement to replace lost tamarisk with native species. We have a similar need for IID to provide a breakdown of what they will and will not provide for under adaptive management. We also need to develop a similar process for evaluating survey results here given that the baseline surveys will be conducted in tamarisk versus the native tree habitat provided as mitigation. IID is again concerned about attempts to directly compare the numbers of covered species between the two areas. As for the drains, guidelines for the IT need to be provided in the HCP. To the extent possible, the results of covered species surveys in mitigation habitat will be considered in future acquisition or creation.

The group reconvened on **January 22, 2001**, to develop a schedule of activities based on the various processes that must be completed by **December 31, 2002**. Most of the scheduling requirements are based on the SWRCB process. This results in a very ambitious schedule at least through the Final EIR/EIS. The ROD for the Service and the Bureau will need considerable additional time to complete the ESA requirements, and the CESA permit also follows the completion of the Final EIR. **The comment period does not close until April 26, 2002**, and the **NOD is needed by the SWRCB to start their process by June 3, 2002**. The result of these scheduling requirements is a very limited window to complete the responses to comments. **All permits must be signed by December 2, 2002** to allow time for completion of the QSA documents by **December 31, 2002**. The group will be working from now until the close of the comment period to resolve the remaining agency issues with the HCP (and EIR/EIS). The Service process requires that a Notice of Receipt of Application go out once we have the application package (application, HCP, IA, and monitoring plan). This is planned so that the public review can run concurrent with the last third of the public comment period on the EIR/EIS and HCP. This would need to be distributed to all of the recipients of the EIR/EIS and HCP. One very large outstanding issue is a decision on the approach for the Salton Sea. IID has targeted **May 7, 2002** as a goal for having made the decision.

The group met again on **January 28 and 29, 2002**. The discussion began with the topic of drain habitat monitoring. Compliance monitoring is focused on IID meeting its commitments, but the requirements of effectiveness monitoring are less clear. The drain surveys will only be conducted through year 12, so there will not be an opportunity to compare the drains and the managed marsh throughout the term of the permit. We reviewed the guidelines that were developed for the HCP IT to consider in evaluating the covered species survey results, and the group felt that we were headed in the right direction with that process. Adaptive management will be possible

within the limitations set by funding and the excluded actions to be documented in the text. A cap will also be set for water that will be available to the created habitat. This is of concern because we may not have a good baseline to determine water needs. The Sonny Bono Salton Sea National Wildlife Refuge (SBSSNWR) currently does not manage habitat for the variety of covered species in the HCP. Their current water use would be less than what would likely be required for the created habitat if we include a component for the California black rail because bulrush habitat has greater water requirements than the marsh currently managed for Yuma clapper rail in which cattails predominate. The SBSSNWR also identified some infrastructure requirements that should be incorporated into the design of the managed marsh.

The next major topic in the meeting was the quantification of the take. There will be stated acreages in some cases that can be used to quantify take. This is still problematic given that we have very little occurrence data for the covered species with which to analyze the impacts of that take. In some cases that exact acreage is not clear at this time (e.g., shoreline strand), and in other cases we aren't working with acreage figures at all (e.g., canal operations and maintenance in desert habitat). CDFG is looking at the possibility of developing estimates of the take and deriving mitigation acreages for the covered species so that the "fully mitigated" standard under CESA can be met. The Service will seek input from the Solicitor as to how best to provide for quantification of the take allowed by the permit. Another question that came up during this discussion is how this take that is so difficult to quantify will be monitored. Some of these species would be very difficult to detect if injured or killed making monitoring of the take very difficult. This issue has not been resolved. IID is very concerned about the possibility of exceeding the permitted take.

We continued our discussion with the topic of tamarisk scrub monitoring. We concluded that in this and the drain habitat category we would place the vegetation monitoring under compliance given that developing habitat characteristics in the created habitats is part of the commitment in the HCP. Compliance requirements relative to acquisition under this habitat type include: agency approval of the property selection, documentation of the acquisition, and documentation that the appropriate management is being implemented. Effectiveness monitoring will include general bird surveys. Relative abundance as a component of effectiveness will be dropped from the goals for all habitats/species. Baseline surveys will not be conducted in the tamarisk scrub so evaluations of the species survey results will consider the results of other studies within the local area and region. Because some of the covered species occur in the area only rarely, the HCP IT will also consider use by similar species or species with similar habitat needs in their evaluation of the effectiveness of the replacement native tree habitat in achieving the goal of the HCP. Surveys should continue throughout the permit term (albeit at a lower frequency than during establishment of created habitat). IID will have a list of actions that are excluded from consideration such as additional water for habitat beyond the original budget and a change in properties as mitigation after property has been acquired. Cowbird trapping can be considered provided it is within the management budget, but IID was not open to it as a requirement of native tree habitat creation.

The group meet on February 7, 2002. We began with a brief discussion of the phased mitigation approach for the Salton Sea. The resource agencies expressed their concern that the water requirements had not been addressed appropriately, and IID agreed that this needs to be resolved. If they exceed those figures being used, it may require that they be located where some or all of the flows out of the ponds could be reclaimed. They concurred that the new model results have raised the acreage requirements to 6,333 acres with the target fish production still at 500 pounds/acre so the acreage must be limited to wet acres only. The acreage of the ponds also need to be increased to allow for regular maintenance of some ponds. We will also need to determine if food supplementation will be required given this could have a major impact on the costs associated with this approach.

The main topic for the day was changed and unforeseen circumstances. Staff from the Service's Regional Office joined the discussion by phone. The general approach in the document is that IID has a very strong incentive to re-establish their water deliveries following the types of events discussed, and they don't believe the system would be out of operation long enough to have a significant impact on covered species. Therefore, any thing that is large enough to significantly impact covered species is unforeseen. The Service did not see this as an appropriate way to define these concepts. IID has never had a break in their deliveries lasting more than three days. They do not believe they should have to address something that has not occurred in their history. The Service encouraged them to make this a commitment in the document if they have no evidence to suggest that it will be exceeded. There are several examples in the text that state that water deliveries will be re-established, but they do not indicate that other corrective actions will be taken to address impacts to covered species (e.g., replanting vegetation in the managed marsh). IID stated that their intent was to take the action necessary to maintain the function of created habitat. This needs to be expressly stated in the document with examples of the types of actions that will be implemented in response to the events discussed. Changed circumstances need to be specifically addressed. This includes a budget component so that they agencies can determine if this aspect of the HCP can be implemented. The term "operating budget" does not make it clear that there is adequate funding to address other events beyond day to day activities.

We discussed toxic spills and the need for Emergency Response Plans that address the HCP as well as human health and safety. The habitat creation plans should include an emergency response component. The HCP biologist needs to be tied into the IID response network. The process needs to include: pre-spill planning, response activities that consider the requirements of the HCP, repair of any physical damage, and mitigation of covered species impacts based on post-spill monitoring. We also discussed fire, which could affect the created habitats. IID is looking at inserting a blanket statement that they will address impacts to the created habitats in order to return them to a functional state. A topic that needs to be added is parasites. Management funding needs to include standard measures to address bird disease, particularly botulism. IID is willing to address all of these issues in the mitigation sites, but they are not necessarily agreeing to address those throughout the habitats, in particular in the broader desert habitat. They will reconsider some of the language in the text. The intent of their approach needs to be clarified and

independent. Coordinating with the State and Federal facilities is appropriate, but reductions in management at these facilities due to budget constraints does not reduce IID's responsibilities.

We ended the meeting with a discussion of quantification of take. Given that this is a "management" HCP rather than a land development HCP, it is more difficult to quantify take. Under the CESA, a permit issue under section 2081 normally must quantify the take of individuals. If we can't develop some means to assess the take, it may be difficult to permit. IID objects to dropping species given that they feel that they are doing additional mitigation to address all of these species. They are aware with the difficulty with the list of 25, but they were working under the assumption that the others would be covered. The resource agencies will look at the impact analyses and try to evaluate if there are others that will not receive coverage.

On **February 8, 2002**, the Service and the CDFG met to discuss issues related to quantification of take. We began by reviewing individual species and determined that some categories were developing as a result. We did not get through the entire list of 71 species (we deferred on the 25 species discussed with IID previously), but we did identify approaches for the desert species taken as a result of canal maintenance activities. It appears that some additional species should be dropped on the basis of a lack of evidence for occurrence (e.g., elf owl) or a lack of anticipated take (e.g., golden eagle and ferruginous hawk). We agreed to continue our review and compare notes next week.

The group met again on **February 14, 2002**. We began with a quick review of the outstanding HCP tasks. We then proceeded to discuss comments on the drain monitoring re-write. The major issue associated with this discussion was what triggers agency approval and what does not. We determined that it would be appropriate to require agency approval for management actions that are outside what was proposed in the management plan. Any adaptive management options covered by the plan would have already gone through an agency approval and can be implemented at the discretion of the HCP IT. This led to a discussion of how the IT will function, and the group agreed that all efforts should be made for the IT to reach consensus. Veto authority will remain for the agencies. The need for long-term vegetation monitoring was also discussed. This should be planned for given that the agencies will be looking for some means to document that the success criteria are being met throughout the course of the permit. This was also true for the tamarisk scrub category. The group agreed that the general procedure outlined for the drain habitat monitoring should be carried over to the tamarisk scrub as well. For both habitats, we will need to define a water budget that includes adequate water to address all of our adaptive management options and changed circumstances. The desert monitoring is still lacking a monitoring component for the restoration/acquisition aspect in addition to the avoidance/minimization component that has already been addressed. This will be developed following the general paradigm used for the other habitats. One issue that still remains is the duration of the responsibility: perpetuity or the term of the permit. This still needs to be resolved.

When we re-convened on **February 15, 2002**, we chose to focus on the phased mitigation. We need to develop much more detailed specifications as all were concerned that the current cost

estimate of \$110 million is too low. The water agencies would like to maintain both options for the Salton Sea through to the ROD rather than identifying their preferred alternative in the Final EIR/EIS. This is problematic for the resource agencies in permitting. We acknowledged this as an issue and continued in our efforts to identify more specifically what would be required to implement the phased mitigation approach. There are essentially three phases to this approach: the hatchery only phase, a transitional phase, and the pond phase. During the hatchery phase, we estimated that over 63,000,000 fry would need to be released annually to the Salton Sea to achieve a 3,200,000 pound production of forage size fish. This requires a spawning facility that includes breeding ponds, grow out ponds, netting for the grow out ponds, and food for the fish in the grow out ponds. Some means would be needed to blend water such that the fry could be produced at or below their salinity tolerance, but that they could be brought up to the salinity of the Sea prior to release. Multiple release points may be needed to reduce predation on the fry stage. It may be more cost effective to maintain the fish in controlled conditions to a larger size ("stockers") to increase their survival. This hatchery phase would include tilapia as a forage fish and the other three sportfish present in the Salton Sea. During the transition phase, additional grow out ponds would be added to get the fish to stocker size prior to release into the ponds (if not already done), and the ponds themselves would be constructed. The sportfish hatchery would be phased out at this time. If deemed appropriate, a different species of forage fish may be used for the ponds phase of the mitigation given the temperature sensitivity and other problems that may occur with tilapia (e.g., disease). The production requirements would be the same in this phase as it was for stocking the Salton Sea. To minimize disease and contaminants issues, canal water would be used. Given the potential water requirements (the actual volume is still being determined, but may be on the order of 100,000 AFY), it may be necessary to place the ponds higher in the delivery system where the conveyance capacities are higher. Some kind of fertilization or nutrient supplementation will likely be required given that canal water is what is being discussed. We also discussed the possibility that aeration will be required.

We completed the meeting by continuing our discussion of the IT. The funding will be provided on an annual basis, but it would be reasonable to have a contingency fund set up at the beginning to address larger adaptive management changes and/or changed circumstances. The IT will be staffed by IID, the Service, and CDFG. The Implementation Biologist (IID Staff or contract) will not be a member of the IT, but that individual will report to the IT. Every effort will be made to reach consensus on issues, but there may be cases where that is not possible. In those instances, the staff of the agency which does not agree will elevate the issue within their agency. The agency can exercise veto authority through official correspondence on the issue at hand.

Staff from the Carlsbad Fish and Wildlife Office traveled to Sacramento to meet with the Solicitor to discuss the project and the HCP on **February 28, 2002**. Some issues of concern were identified that will need to be resolved with IID. This includes the following. We need to be able to document that on-farm and systems conservation can be implemented to address both the water transfer and the mitigation water given that the current document does not specify that fallowing be used for mitigation water. We need to have documentation that the mitigation package meets the maximum extent practicable criterion. This includes an explanation for the lack of a speed

limit in the desert habitat. We also need documentation to support that the water agencies have adequate funds to implement the HCP, including the construction and long-term management costs. The permit will not include take for plant species. The basis for the take being provided has to be well documented. We should look at best management practices for construction projects as minimization measures. It is inappropriate to cover only the vegetation removal aspects of herbicide use. We need to consider the potential toxicological consequences of those applications in our approval, therefore it would be better to drop this from the covered activities. The lack of preservation in perpetuity should be reconsidered. We need to have a time limit on the development of the management plans and a mechanism if the IT cannot reach consensus on how created/acquired habitats are managed. If coverage is going to extend to farmers' irrigation and water conservation activities, they have to be under IID's direct control. We need a mechanism for this. Coverage for lease of lands for activities (such as agriculture) that are not covered activities cannot be included in the permit. Specific indemnification for the actions of lessees should not be required. These topics will need to be scheduled for a future meeting.

The group met again on **March 1, 2002**. The meeting began with updates on IID's information workshops on the project and the briefing for the new Director of the Fish and Wildlife Service. Fallowing was the primary topic for this meeting. We began by comparing the model results for the Proposed Project, Alternative 4 (all fallowing) and Alternative 1 (baseline). Given the time differential, the mitigation requirements for fallowing would be 5,333 acres for the fallowing approach versus 6,333 acres for on-farm and systems conservation (using the maximum confidence interval). If the medians are compared rather than the maximum confidence interval differential, the ponds would need to be 2,000 acres for the fallowing vs. 3,667 acres for the Proposed Project. IID felt that this acreage differential was adequate to make fallowing a more appealing approach whereas that based on confidence intervals was not. IID will evaluate the probabilities of results off the median to justify this approach rather than the confidence interval approach. IID would also like to evaluate the use of drain water in the ponds to determine if they can offset any potential selenium problems by increasing the flow. They will look at this comparison for both the Proposed Project acreage and the acreage required for Alternative 4. Temperature may also be an issue that needs to be addressed. Fallowing is also expected to reduce the managed marsh mitigation and pupfish requirements through reduction in selenium concentrations and reduce the tamarisk scrub mitigation by eliminating the impacts associated with construction of lateral interceptors.

We need to determine if there are any mitigation shortfalls with Alternative 4 and Approach 2 (mitigation water). If mitigation water is to be used, IID wants to know how long that requirement would remain. They do not see a need to extend it beyond the point when fish are gone. The water agencies will not support continuing fallowing to facilitate restoration unless the restoration project pays for it. IID is also interested in delivering the water to the Salton Sea at larger than the volume of annual reduction but for a shorter period of time (to the extent that it can be done without flooding shoreline facilities). The issue associated with this approach is that the volume is based solely on the model and cannot respond to the continued presence of fish in

the Sea. IID will complete the necessary model runs to identify the appropriate alternative delivery sequence.

CH2MHill provided an update of the desert monitoring text and a new flow chart.

We spent the final part of the meeting discussing CDFG's efforts to quantify take. They have identified 44 species that they feel warrant take in their permit. We walked through a couple of examples of their analysis with the group. CH2MHill is going to develop a similar analysis with nine examples of the remaining species to determine if take can be identified. One of these was from the group of 25 questionable species as IID is still interested in maintaining these as covered species.

We covered several topics at our meeting on March 7 and 8, 2002. This included the issue of preservation of created or acquired habitat in perpetuity versus for the term of the permit. IID agreed that preservation and management in perpetuity would be appropriate for those strategies that are replacing habitat that is lost permanently. This applies to Tree Habitat 1 and 2 and Desert Habitat 5. For the managed marsh, the desert pupfish strategies, and the Salton Sea strategies, IID will commit to evaluating the status of those in year 70. If they are interested in having their permit extended, implementation of those strategies including management of created habitat will continue. A limited set of options to consider will be stated in the document. The purpose of addressing this issue is to assure that there are not impacts associated with the discontinuation of management of created habitats.

We briefly discussed recreational activities and the need to specify the scope of the projects that are being considered. If the location can be specified, this would also be helpful. CH2MHill will attempt to make the language more specific.

We discussed the problems that remain with the coverage of herbicide applications. Although the HCP does not call for coverage of take associated with the toxicity of herbicides, it does call for coverage of the use of herbicides. This necessitates the same analysis in terms of direct effects that we do not have the resources to develop at this time. Coverage for toxic effects are deemed covered by the Environmental Protection Agency through the registration process that they are now consulting with the Service on. It was decided that the activities section would discuss the fact that herbicides are used as part of maintenance, but that coverage would not be included for this activity given the problems associated with it. The Service was tasked with developing language to incorporate into the HCP.

We discussed the HCP IT process and structure was the next item on the agenda. CH2MHill had developed a flow chart to represent the decision making process. We modified the process to indicate whether a specific decision was within or beyond the scope of the HCP or applicable management plan. If within the scope, consensus among the HCP IT will allow for the action to be implemented without any further approvals. If either consensus cannot be reach among the HCP IT or the action is outside the scope of the applicable plan, IID will need to seek consensus

among the decision-making authorities within the three participating entities (IID, CDFG, and the Service).

We also discussed burrowing owl monitoring. We were cautioned by the Service's monitoring expert that the 20% annual monitoring may not give an adequate population perspective. Adequate "calibration" of the approach will be needed as part of the demographic study. We were also reminded that any manipulations (e.g., relocations and artificial nest boxes) should be approached through hypothesis testing.

We discussed the fishery and mitigation with CDFG expressing concern that aspects other than the fish-eating birds were not being addressed adequately. They see two reasons to include more than tilapia in the hatchery efforts: tilapia are impacted by colder temperatures in the winter and may not be available in adequate numbers to support the birds, and there are recreational impacts that need to be addressed. IID is open to rearing other species, but cost is an issue. IID recognizes that there are many details yet to be refined in the mitigation approach. This includes the release size of the fish going to the Sea versus fish released to the ponds, the timing of the phases, the location of the ponds, and the source of water.

The Service then provided a summary of issues raised in our meeting with the Solicitor. This includes the need for documentation that the HCP achieves the "maximum extent practicable" standard for minimization and mitigation, the document should more fully explain why mitigation does not change with the volume of water conserved and transferred, the need for documentation that adequate funding will be available to implement the proposed HCP, and the need for effectiveness monitoring to demonstrate the assumed benefits to covered species. We also discussed the approach to take that was recommended by the Solicitor that included defining an acreage area for the effect, the nature of the effect, and whether that effect was expected to result in any mortalities or just harm/harassment. This seemed to be acceptable to IID. No take is provided for plants, but they are evaluated under the internal consultation. The potential conflict between the "otherwise lawful" language under the ESA versus potential take of fully protected species was raised, but IID's attorney responded that the Service has granted take for fully protected species in other permits. Fully protected species remain a big issue for State permitting. The management plans should have a time frame for completion, and the use of conservation easements needs additional details to be provided. There were additional issues relating to third party coverage, decision-making in the HCP IT, coverage of IID as a lessor, and potential impacts to the National Wildlife Refuge.

We reviewed many small issues which came up in the Service's review of the HCP and resolved most of those, then we continued the discussion with a review of the Desert Monitoring re-write. The main gap in this write-up was a discussion of habitat restoration under effectiveness monitoring. CH2MHill agreed to develop language for this section.

The Desert Pupfish - 2 wording is still problematic from the Service's perspective relative to a recent jeopardy opinion regarding the selenium criterion. IID is not open to a stated threshold

above which they need to take corrective actions, and they were hesitant to put a specific time frame on implementation of actions under this strategy. The Service will confer internally on the implications for our jeopardy analysis and possible solutions to address the issue. We also discussed desert pupfish monitoring (excluding selenium pending the Service's discussions) and identified the obligations for compliance monitoring under each of the other pupfish strategies. We reviewed the flow chart developed for Desert Pupfish - 4 and concluded it was workable. The remaining strategies are best addressed in terms of effectiveness through general population status information. We discussed problems associated with gathering these data, and determined that the approach of having the HCP IT study the issue was best. However, the current methods will be used to survey for pupfish in the interim. We have yet to determine the schedule for these surveys.

The group met again on **March 14 and 15, 2002**. We began the meeting by discussing the analysis done of the model results linking the hydrology between the proposed project and the baseline. The differences between the outputs were nearly normally distributed, and the 95% confidence interval resulted in the same 19 year difference that we had seen in the salinity curves. Under the all fallowing alternative, however, the 95% confidence interval on the difference was 14 years. This is probably related to the reduced number of outcomes incorporated into the modeling under the fallowing alternative. When we examined the distribution of the differences, they showed a skewed distribution toward the smaller differences. This may make it appropriate to consider a 90% confidence interval in this case, reducing the difference between this alternative for the project and baseline to 12 years. This would reduce the mitigation requirement if fallowing were the sole means of conservation used.

We discussed Plan Implementation, specifically the new text provided for Sections 5.1 and 5.2. Third parties are incorporated into the planned coverage, but these parties are not signatories to the Implementing Agreement (IA). The IA will need to include a mechanism (possibly the contracts between IID and the farmers) that addresses their coverage under the permit. A more general issue is the lack of avoidance/minimization measures to be incorporated into the third party actions. We need to provide text in the document to indicate why we don't need such measures and/or why such measures cannot be implemented.

CH2MHill provided a presentation that modeled different scenarios of water use in the mitigation ponds. The water volumes being discussed by the Principals is not adequate to prevent selenium accumulation in the ponds. This is undesirable for the mitigation, and CH2MHill evaluated what increases in water flows would be necessary to minimize this impact. It was determined based on their analysis that the selenium concentration could be kept below 5 µg/L by doubling the originally proposed flow using canal water or by using New River water at six times the originally proposed flow. The risk for birds could then be deduced based on the stilt water to egg model. Given that IID is not expected to be willing to fallow additional land to increase the flow to the ponds, the use of New River water may be the only option (Alamo River water has too high a selenium concentration to be used). The graphs presented were based on the baseline concentrations, so this would have to be updated incorporating the project results. Several other

concerns were raised that would need to be addressed prior to a permitting decision being made. This included: the need to consider what water reclamation in Mexico might mean to the available volume and river selenium concentrations, the need to consider other problems that may be associated with New River (particularly disease), the need to consider the effects on fish growth and survival in the ponds given the New River water quality, and the need to consider increases in bioaccumulation associated with a sediment versus a water column pathway of exposure. There may also be outside opposition to the use of New River water for the mitigation that we should be prepared to consider.

We discussed the pupfish adaptive management program including two new flow charts provided by CH2MHill. Aspects that were added included the opportunity for outside information to be incorporated into the program, the obligation to take action relative to selenium once in all of the pupfish drains, the ability to take additional actions provided the contingency fund can support them, and firmer time frames for the studies required as part of the overall pupfish strategy. It was decided to add the study of pupfish survey methods as a measure to address the effectiveness survey needs under strategies 1 and 3. Selenium monitoring will be required in the drains at least until we reach equilibrium in these concentrations. The IT will develop a specific monitoring plan. The Service is discussing internally how previous consultations fit into this process and whether specific action will be required at the concentration identified as a jeopardy for desert pupfish previously.

We continued the meeting the next day with a discussion of agriculture, and we revisited the concept of avoidance and minimization measures. The HCP also covers removal of water conservation measures, and that aspect has not been addressed in the discussion or the species impact analyses. CH2MHill committed to developing language to fill this void. Given the nature of the ponds and the maintenance anticipated for them, there should be very limited potential for take of the proposed covered species. We also discussed the lack of a monitoring discussion for agriculture. One aspect that was not considered feasible was to monitor the effectiveness of bird strike avoidance measures. Because bird strikes are not necessarily a regular or measurable event now (although we know they occur), it is unlikely that meaningful data could ever be acquired to measure the effectiveness of measures designed to increase the visibility of new power lines. Compliance monitoring could come in the form of the regular valley-wide crop reports that IID develops and general statistics for the water conservation measures implemented. Reports will be provided as to the number and mileage of any power lines added and diversion measures installed.

The remainder of the meeting was spent participating in a conference call with the Principals, the Director of CDFG, the Manager of the Service's California-Nevada Operations Office, and the Regional Director of the Bureau of Reclamation. The topics discussed included the progress on the fully protected species legislation. There are two bills being considered: is one general bill and one bill that specifically addresses the water transfer. There is apparently still resistance to passage of both of these bills. MWD has a major issue in regards to their water intake and razorback suckers in the Colorado River. They are looking for coverage that would be specific to their intake. The Principals are also looking for assurances from the State as are provided under

the Service's No Surprises Policy. This is not provided in the CESA, and the CDFG is concerned that this might set a precedent that is undesirable. CDFG will meet internally to discuss this issue. The Principals re-iterated their desire that they be allowed to pursue funding for the mitigation from sources outside their agencies. We discussed the status of the two Federal bills, and it was suggested that no action would be taken on these before funding action was taken by the State. We briefly discussed the mitigation ponds, and the staff asked that they be given another month to pursue additional details on the feasibility of this approach. The discussion then turned to fallowing and associated mitigation requirements. MWD discussed their concept of transitional fallowing. The resource agencies would want the timing of the transition to be based on the presence of fish in the Salton Sea rather than model predictions. There are still major socioeconomic issues to overcome, and there is very little general support for fallowing. Concerns about other potential lawsuits were raised for the fallowing scenario. The Service was asked if it can permit the project with the mitigation, but many issues remain to be resolved before that question can be answered. The implications for restoration cannot be ignored. The Service is obligated to permit the approach that avoids and minimizes to the maximum extent practicable. The final issues discussed were the covered species list and potential problems associated with differences between State and Federal permitting and processing the permits in the time frame available. Conducting parallel consultations on the two approaches for 96 species will make it very difficult to complete the required documentation within their time frame. Narrowing the project and the species list will improve the quality of the analysis and make it less vulnerable to a lawsuit. After scheduling the next two meetings, that call ended.

The group met again on March 21 and 22, 2002. We began the meeting with a brief discussion of the materials the CDFG had received from the Texas Parks and Wildlife Department on raising corvina in a hatchery situation. The information seemed to indicate that this was feasible, and adequate information was provided to develop a preliminary cost estimate. This process will require that Salton Sea water be used in combination with other flows to get the appropriate salinity for spawning. The fish will also need to be acclimated to a higher salinity prior to being released. We also discussed some of the information CH2MHill had gathered about selenium in the New River. They are looking at additional runs of the model to evaluate the impact of water reclamation in Mexico. Their preliminary information suggests that the loss of organic material could increase the amount of selenium that stays in solution. This is a concern for use on the fish ponds. However, the sewage flows have higher selenium concentrations than the agricultural flows because the municipal water is all from the Colorado River whereas irrigation water is from a mix of river water and well water. They will continue their efforts to model these changes.

We also discussed the 25 species (in the HCP as "Other Covered Species"). CDFG is developing an approach in which the activities covered relative to these species would be more narrowly defined to reduce the potential impacts associated with these species. The permit would provide for coverage of the take of these species when additional information was available to evaluate the impacts of the take. Coverage for survey purposes would be defined when survey protocols are approved. CDFG will not cover invertebrates, and the Service does not provide take for plants as it is not required. However, plants do need to be analyzed in the internal section 7 consultation,

and there are plant species for which the appropriate information for analysis is lacking. The HCP would also need to identify mitigation for each of these species, although in some cases the proposed mitigation may be adequate. The Service is still evaluating whether this kind of conditional take is possible under the ESA.

We discussed the status of the desert pupfish evaluation, and the Service is still considering how to address the existing jeopardy determination for the California Toxics Rule. IID is only willing to address the changes associated with the project not problems associated with the baseline levels as they feel those are the result of agricultural activities that are not covered. The Service requested model data for the potential pupfish drains so that a drain by drain analysis could be developed for this species. CH2MHill provided new text for the pupfish section of Chapter 4 and a new table for Section 3.7.

We briefly discussed herbicide use. IID is still concerned that they have a gap in coverage for take associated with the degradation of vegetation associated with herbicide applications. Although the ability to demonstrate that any specific take is associated with degraded vegetation is limited, they are not comfortable with this gap. They will have their attorney contact the Regional Solicitor on the issue.

We briefly discussed the approaches for the Salton Sea. We discussed the limitations associated with the discussion of the ponds in the EIR/EIS and determined that much more detail will be needed in the final document. All of the concerns raised relative to the Pacific Institute's Salton Sea proposal will need to be addressed. Also, we will need to incorporate the habitat feature commitments into the design as well as other management concerns (e.g., sediment basins that are paired for continual operation through maintenance cycles). We also discussed the mitigation water concept. CH2MHill is looking at re-running the model to develop a volume of water associated with this mitigation option. The problem is the lack of confidence in the 60 part per thousand salinity threshold for the fish. If an upper bound could be placed on this figure that all parties are comfortable with, the volume of water and delivery schedule could be developed. CH2MHill biologists will attempt to increase the salinity tolerance information that they have to address this issue.

On **March 21, 2002**, Service staff participated in a conference call with the Bureau of Indian Affairs (BIA). Other participants included the Service's regional tribal liaison, the Bureau of Reclamation, and the Environmental Protection Agency (EPA). The purpose of the call was for the Service staff to develop a strategy for the tribal consultation process. The BIA raised several questions including the reason for the delay in initiating the consultation. This was delayed due to limited staff time and efforts to more fully develop the HCP with IID. The BIA and EPA raised several issues that they felt were of concern to the Torres-Martinez Tribe in particular. This includes exposure to winds of contaminated sediments, exposure of cultural resources, concerns that their drinking water could be impacted by the proposed CVWD percolation ponds, there is disagreement between the inflow figures given in the IID document and those provided in the restoration document released in 2000. All acknowledged that the time frame would limit what

can be done in terms of addressing the Tribe's concerns, but all agencies will make an effort to see that their concerns are raised and addressed to the extent possible.

Staff from the Service, Bureau, CH2MHill, and IID met with the Tribal Council of the Torres-Martinez Tribe on **March 25, 2002**. The purpose of the meeting was to provide information on the proposed water transfer and to offer assistance in their evaluation of the document. We also scheduled a future meeting at which the government to government consultation could take place. The Tribe had several concerns about the project. They questioned the delay in beginning the consultation process. The Tribe also had difficulty getting a copy of the draft EIR/EIS and HCP. They are concerned that failure of the HCP will place additional burden on them to conserve the listed species. The Tribe is also concerned about CVWD's plans for using the water and how they might be impacted. They see the two issues of conservation and use of conserved water as linked, and they expressed the opinion that the separation as currently presented was arbitrary. Given that we do not know when CVWD will release their document, it is very difficult for the Tribe to make a determination as to whether the separation between conservation and use is acceptable to them. A great deal of tribal land will be exposed based if the conventional conservation/mitigation approach is implemented. This has not been addressed adequately in the document. They are also concerned about the drains that will flow across their land and the construction that will be required to extend and connect these drains. The use of the water by CVWD is also of concern because the proposed percolation ponds are up gradient of their drinking water well, and the Colorado River is known to be contaminated with perchlorate. All of these issues will need to be addressed to their satisfaction. The Tribe looks to the Service and the Bureau to represent them in this process given the role of the Department of the Interior as their trustee and the actions required of the two agencies.

Staff from the Carlsbad Fish and Wildlife Office joined staff from the Regional Office in a meeting with the Department of the Interior Solicitor and IID's attorneys on the Implementing Agreement on **March 27, 2002**. Counsel for the CDFG was also present. We spent the meeting reviewing the Solicitor's edits to the draft agreement developed by IID's attorneys. Several issues came up during the course of that review. The Solicitor wanted language removed that would tie the Service to the QSA. The Service is not a party to those agreements. The issue of assurances was referenced in several areas of the document. These references are limited to what is provided for in the No Surprises Policy (50 CFR 17.22). CDFG has not yet made a determination as to what assurances they will be offering through their permit. There must be a mechanism that binds third party beneficiaries in some way. The contracts between IID and the farmers signing up for water conservation do offer a mechanism provided the appropriate language can be incorporated into them. IID's attorney will develop some draft language for the Solicitor's review. The lack of minimization measures for the farmers and mitigation for loss of farm land could make the permit/HCP vulnerable. The conflict of saying there is take related to agriculture but the mitigation is maintaining agriculture in the Imperial Valley is problematic. Additional consideration will have to be given to this approach. Leasing will not be a covered activity as there is no need for coverage. Leasing in and of itself does not result in take. There are issues related to extending the coverage to unlisted species under the Migratory Bird Treaty Act

(MBTA). The Solicitor concurred that there is an inconsistency here and volunteered to elevate the issue to a higher authority.

As part of this process IID will have to provide documentation that the HCP can be funded adequately. General cost figures are acceptable, but the Service does have to be able to document that the necessary funding will be available. This also applies to the funding that will cover adaptive management. IID will have to demonstrate why it is biologically adequate. The agreement needs to be worded in such a way that adaptive management has been planned for and does not constitute a minor modification. Monetary damages are not allowed, and all parties should agree to cover their own legal fees. The regulations used should be those in effect at the time of the action/issue. One exception is that the No Surprises Policy will be considered to remain in effect unless a court order strikes it down. IID intends to raise the issues of monetary damages and regulations in effect to a higher authority. Non-severability will apply to the agreement except by mutual consent. Severability of the permits will have to take into consideration the requirement that the activities covered by the permit be for otherwise lawful activities. Take authorization will not be given for plants.

We briefly discussed the topic of herbicide use as a covered activity. IID still sees coverage of herbicide application as necessary, but they will consider the draft language provided by the Service.

The group met again on **March 29, 2002**. We had guests from Kent Sea Tech, an aquaculture operation in the Coachella Valley, and IID also invited their aquaculturist for a discussion of the phased mitigation approach. The Kent Sea Tech staff recommended that we reconsider exclusive use of tilapia in the ponds given their temperature sensitivity. A large proportion of the fish would be expected to die off in shallow ponds during the winter months. They recommended that we consider a combination of tilapia and carp to cover the entire range of temperatures. We could reduce contaminant problems by locating the hatchery facility in the Coachella Valley and using groundwater. If the facility is going to be located in the Imperial Valley with the New River the water source, some treatment will be required to control solids and pathogens. The water requirement for the hatchery is on the order of 3,000 acre-feet/year. We could minimize selenium problems in the ponds by maintaining a high flow rate and using clean food. Based on our preliminary discussion, the capital costs for the hatchery facility are probably on the order of \$ 8-10 million with similar annual maintenance costs. The acreage for the ponds could be reduced by minimal management; they felt that the foraging ponds could support 2,000 pounds/acre without burdensome management. The ultimate density is driven more by what is appropriate for the birds. They recommend that additional species be incorporated into the ponds for a greater variety in size for foraging birds. Fish could be eradicated periodically if selenium bioaccumulation or disease become problems. The monitoring requirements associated with these facilities is not insignificant. They will develop preliminary estimates based on use of existing facilities and groundwater versus new facilities and river water.

For stocking tilapia directly to the Salton Sea, the Kent Sea Tech staff felt that only temperature acclimation would be required. They felt that the tilapia could tolerate the salinity change. Corvina stocking offers a whole different set of concerns as this has never been done commercially. They are willing to develop preliminary estimates for stocking corvina, but the range of costs may be fairly wide. The target is for 150,000 five pound fish per year. They will estimate the number of stocked fish required to meet this goal. They asked the resource agencies to develop target delivery schedules for the tilapia (and carp for the pond phase) to best meet the needs of the target fish-eating birds species. This includes the size and pounds required on a monthly basis. **This information will be provided by April 2, 2002.**

A conference call was held that included the Principals from the four water agencies, the Director of CDFG, the Regional Director from the Bureau of Reclamation, staff from those agencies and staff from the Carlsbad Fish and Wildlife Office. The water agencies were anxious to have feedback from CDFG on the language they have proposed for legislation on the fully protected species issue. CDFG has received the language but has not had the opportunity to deliberate on it. They hope to meet and discuss it next Monday. The water agencies are looking for support from CDFG and DWR in getting legislation through. Following and mitigation is an issue of great interest. The technical staff hope to address this during the Thursday/Friday meeting. The Coachella Canal Record of Decision has been signed. MWD and CVWD are anxious to get a concurrence letter from CDFG. The discussion included the upcoming meetings among the water agencies and opportunities to educate entities outside California on progress to date. The SWRCB petition process is also a key part in this process. They are hoping that legislation can come in time to be considered in the hearings. The water agencies were concerned about the CDFG comment letter on the QSA Programmatic EIR, and they have asked that CDFG coordinate their comments with them on the draft EIR/EIS for this project. As the final topic an agenda was developed for the meeting/call on April 9th.

Three public hearings were held to receive testimony on the EIR/EIS on April 2, 3 and 4, 2002. The hearings were held in La Quinta, El Centro, and San Diego. A verbatim transcript of the comments can be found in the administrative record.

The group met again on April 4 and 5, 2002. We began with a brief discussion of the CDFG comment letter on the QSA Programmatic EIR. CH2MHill provided some preliminary cost figures from Kent Sea Tech on the fish production. Hatchery start up would cost on the order of \$4-5 million. Annual production would be approximate \$2/lb. of fish or \$6.4 million/year. CH2MHill suggested that the agencies consider stocking the fish to the river deltas rather than constructed ponds. Barry Costa-Pierce suggested that there may be as much as 500 acres around the river mouths that is of lower salinity that could support fish longer. The Service has several concerns about this approach: there would be no way to manage for avian botulism in this situation, there is no way to assure fish availability in such an uncontrolled situation (the fish could go up river or into deeper water), we don't have accurate measurements of the size of this "estuarine" area, we don't know how it will change with salinity, and we don't know how stable it is under windy conditions. The Service asked that the constructed ponds be considered a primary

approach with consideration of this if the appropriate supporting information can be provided at some future date.

We moved into a more detailed discussion of the ponds. IID believes that 500 acres is feasible given the space that will be available around the New River as the Salton Sea recedes. The ponds would be flow-through systems with a gravity-fed supply, but they would have to be pumped when complete drying is needed. They were planning for each pond to be approximately 40 acres using cut and fill construction. A justification for 500 acres (as opposed to the 5,000 acres in the draft document) will need to be developed for the final version of the document. We need to confer with the Kent Sea Tech staff to confirm that it would be reasonable to stock 630,000 2-5" fish in 500 acres of ponds within a month's time. This is the proportion that was assigned to February based on the bird distribution. One issue that came up in terms of timing of construction was that it is likely that we would need to replace the island nesting habitat before we would need to stock fish in the ponds. IID was open to construction and filling of the ponds with islands to occur early to meet that need with fish stocking to occur later. We need to determine how much nesting space is required and how much island space to assign to each of the ponds. CH2MHill will re-write the appropriate sections of Chapter 3 and 4 to reflect the fact that IID is now committing to 3.2 million pounds of fish annually to be stocked to 500 acres of ponds. The delivery schedule will be finalized by the HCP IT.

For Approach 2 (mitigation water) IID is looking for an upper limit on this requirement rather than taking the approach that water would be added until the fish are gone. We need to determine an appropriate threshold. In order to provide adequate justification for the threshold, it will require looking at some of the literature on salinity tolerance in tilapia. The agencies requested that CH2MHill provide copies of four references that they had identified that looked at salinity tolerance in the range of interest (60 - 80 g/L). A threshold of 60 g/L did not appear to be appropriate given that one of the citations indicated that reproduction was seen at 69 g/L. Aquaculture production values seemed of limited usefulness given that they would all likely be at much lower salinities.

We briefly discussed the re-write on the desert pupfish monitoring section. The Service is still evaluating the selenium strategy, and additional monitoring requirements may stem from any changes in that strategy. We also discussed the other covered species. CH2MHill is developing the take table per the guidance received from CDFG, but the Service is still lacking adequate information to address these species to meet the permit issuance criteria. This can be re-evaluated when CH2MHill provides the table requested by CDFG. The write-up for changed and unforeseen circumstances should be available next week. CH2MHill is incorporating information on IID procedures for responding to emergencies such as hazardous materials spills. We discussed the phased mitigation approach under a fallowing for conservation and transfer scenario. If the same approach is used, the 14 year difference requires 2.3 million pounds of fish per year. If we consider that the probability distribution for the fallowing alternative was skewed towards the low end of the distribution, a 90% confidence interval looks acceptable. This would reduce the requirement to 2 million pounds of fish per year (a 12 year difference). We discussed

the corvina hatchery. Although this is not a specific requirement in the HCP, CDFG is still looking for cost figures to address this approach to mitigation for recreational impacts. The hatchery operation for this species will need to be ready earlier than that for the tilapia.

We also discussed Salton Sea monitoring by working through the text in the HCP. IID needs to be prepared to cover the costs of fish monitoring if CDFG cannot follow through on this commitment. A related concept that will need to be addressed in the IA is the level of commitment from the resource agencies and what it will mean to the implementation of the HCP if one or both of the agencies is/are not able to perform some or all of the required tasks. This needs to be reflected in the Roles and Responsibilities language the agencies are providing for Section 5:1.2. We determined that bird surveys of the ponds should be conducted in summer in addition to spring, fall and winter (IID was not present to concur). Adaptive management measures are no longer focused on in-pond production but should include: changing the species of fish being used (one with similar culturing requirements, however), changing stocking procedures, and adjusting the size of the fish. Disease will be addressed under changed circumstances. In terms of coordinating with a restoration project, the language was modified to reflect that stocking would continue until restoration re-establishes natural fish production in the Sea. IID was not present to concur, but this would not be an increase over what is required if there is not restoration as stocking will continue to the Sea or the ponds for the permit term.

Approach 2 offers different challenges to monitoring. We concluded that flow measurements would be the most direct measure of compliance. These measurements would be compared to the projections for baseline inflows. A component of effectiveness is tracking the salinity changes that result from the supplemented inflows, and fish presence would also be appropriate to monitor. However, given that the salinity projections and estimates of fish salinity threshold are estimates, there are no requirements of IID in terms of adaptive management should the actual salinity and fish occupation changes not match our expectations. Provided compliance with this avoidance measure can be documented, no additional monitoring is expected to be required. The agencies will confirm this assumption.

Our final topic was shoreline strand monitoring. The Service recommended that the HCP IT be given flexibility not only in terms of the frequency, but they be allowed to extend the monitoring if they deemed it appropriate. IID was not present and so could not concur with this change. We also modified the language to allow for more advanced technologies that could replace the use of aerial photography. All agreed that such advances were likely in the next 75 years.

The HCP group met again on April 10 and 11, 2002. We began with a discussion that include the State and Federal Refuge managers on the topic of managing the IID managed marsh mitigation. The Sonny Bono Salton Sea National Wildlife Refuge has concerns about both their water priority and the fact that they are on month-to-month leases. While IID instructed them that this situation was negotiable, the management of the mitigation is considered a separate issue. IID would guarantee water for the marsh and provide funding for management. All of the infrastructure would be constructed by IID. Both agencies were open to the concept, but many

details would need to be resolved prior to such a contract being developed. The location of the proposed mitigation would factor into which agency would be the logical choice for management.

The discussion then moved on to Approach 1 for the Salton Sea. We have three proposals that have been discussed: 1) 5,000 acres of ponds with in-pond fish production/hatchery supplementation using canal water and built on agricultural land, 2) 5,000 acres of ponds with in-pond fish production supplemented by hatchery fish using New River water and built on exposed seabed/New River basin land, and 3) 500 acres of ponds to be stocked with hatchery produced fish using New River water and built on exposed seabed/New River basin land. The concerns that have been raised regarding the last proposal include: increased transmission of avian disease, interference among birds during foraging, control of water quality such that toxic materials are preventing from entering ponds, responding to fish kills (clean up and re-stocking), bioaccumulation of selenium and DDE, and increased exposure of fish to pathogens that could enhance the risk of avian botulism. Future documents should address these issues. The costs have only been developed for proposal 1, but the \$110 million estimate did not include an adjustment for inflation, the discount rate may be too high given the current economic climate, and inadequate water was included in the proposal. We estimated that at least double the proposed water volume would be needed. Preliminary estimates of costs on proposal 3 are approximately \$75 million, but this has also not been adjusted for inflation. Water is essentially free in this proposal.

The discussion then moved on to Approach 2 for the Salton Sea and how this would be implemented. The primary concern is the length of time mitigation water would have to be added. The general concept that was developed is that water would be delivered to the Salton Sea until fish-eating bird numbers had declined to a yet to be determined level or the year 2030, whichever was first. The year 2030 represents the 95% confidence interval on the baseline reaching 60 g/L salinity (this is the same cutoff used in developing the mitigation in Approach 1). The most direct approach to this as mitigation would be to add annually what did not go to the Salton Sea the prior year as a result of water conservation. The volume would be adjusted for the lower salinity of Colorado River water versus the drain water that is lost. IID would like the resource agencies to consider a schedule that provides for earlier delivery of water to the Salton Sea (i.e., not annually based on the prior year's conservation), but the volume of water delivered would be equivalent to what is needed to keep the salinity of the Sea below 60 g/L until 2030. Service staff responded that the slope of the salinity curve is important along with the endpoint. Fish are likely to be more stressed and less healthy the closer they get to the maximum level of their salinity tolerance so that period of maximum salinity should be no longer than it would be with the baseline projection. IID intends to run the Salton Sea model to determine the optimal delivery schedule that still meets the requirements. **The costs associated with this approach will be based on the volume of water required at the water transfer price of \$250/acre-foot of water.** One issue related to the permit is that this requirement differs depending on whether water goes to CVWD or not. A mechanism will have to be developed that addresses the salinity changes associated with variable use of the water by CVWD.

The Bureau of Reclamation was represented at the meeting and suggested that we reconsider our baseline. It was their staff's contention that if the voluntary efforts fail, IID's reasonable and beneficial use will be reconsidered and their water deliveries reduced. Impacts to the Salton Sea without the project are therefore underestimated. IID countered that the baseline in the document is the Bureau's baseline as well given they are the Federal lead on the project. IID also expressed the opinion that the Bureau cannot reduce IID's deliveries (as an enforcement action) without regard to the requirements of the ESA. CDFG also expressed concerns about such criticisms at this late date.

For the remainder of the meeting we discussed some outstanding issues. The Service was asked if there had been any change on their position relative to the other covered species. Staff relayed that no significant discussions had occurred on that topic. IID was urged to consider that the legal liability associated with coverage in the permit given the state of knowledge may be a greater risk than that associated with not having those species covered in the permit at this time. The Service is still waiting to see language as to why a lower speed limit is not practicable in the desert. The issue of coverage of conversion of lands leased to the Refuge to some other activity came up. Service staff expressed the concern that the current documents do not address the biological impacts of this action nor is it mitigated in the HCP. IID decided that this would be excluded from coverage and would be addressed separately if necessary. We discussed the fact that there is take of desert species that is minimized but not mitigated. CDFG suggested that this could be addressed by surveys to determine the number of individuals likely to be impacted with preservation of adequate acreage to offset this loss. This sounds reasonable in concept, but it may offer challenges in the Federal process. The Service is still evaluating the language in Desert Pupfish Strategy - 2 and hopes to have a determination soon. We discussed the possibility that the cap in water use or the Inadvertent Overrun Policy could result in cuts of water deliveries to the refuges. This is addressed in the document by assuming that the payback would occur through fallowing of agricultural lands. No impacts are expected to the refuges provided they do not exceed their standard water orders. If they take more than their order, they would be required to reduce use the following year to make up for that over-usage.

Species that are impacted by agriculture need to have mitigation of those impacts to the maximum extent practicable (or fully mitigated per CESA). This occurs in some cases through benefits accrued from other mitigation strategies but not in all cases. Some are only discussed in agriculture (mountain plover, ferruginous hawk, and long-billed curlew), and others have mitigation in the Tamarisk scrub strategy only if it is placed near agriculture (Swainson's hawk, white-tailed kite, and loggerhead shrike). This may be undesirable given the cowbird population in the area. The group agreed to consider what mitigation might be feasible for these species. New language for changed and unforeseen circumstances should be available next week. We have a CEQA issue with the fact that the CVWD Water Management Program EIR is not going to be available for review during this project's comment period, and this project's EIR/EIS refers to it. We briefly discussed mitigation for Alternative 4, and concluded it would essentially be the same as for the proposed project scaled to a lower fish requirement (2 million pounds annually

once adjusted for the lower impacted and the skewed distribution of model outputs). We concluded the meeting with a discussion of the process and schedule.

Staff from the Service, the Bureau, and CH2MHill met with the Torres-Martinez Tribe on **April 12, 2002**. The staff from the Bureau of Indian Affairs, the Environmental Protection Agency, and CVWD were also present. We began with a discussion of the various documents involved in the water transfer and QSA. The Tribe was concerned about the way parts of the project were segmented into different documents and the fact that CVWD's document would not be available during the comment period on the water transfer EIR/EIS. This is problematic, and the lead agencies will need to find a way to address this gap as the process proceeds. The Tribe will have to consider what they have before them in making their comments. If additional information is received in the final EIR/EIS, they would like the opportunity to provide comments and have them entered into the project record. We proceeded to discuss their comments on the QSA Programmatic EIR and the Bureau's Programmatic EIS on the Implementing Agreement/Inadvertent Overrun Policy. Many of these comments focused on CVWD and their use of the additional water. This discussion centered around issues of water quality in the Colorado River versus the groundwater. Perchlorate is of great concern because it is present in the Colorado River at levels of concern but not in the groundwater. This issue only recently came to CVWD's attention because the action level recently dropped, and it is now below the current river concentrations. CVWD has this concern in the upper basin as well because recharge is also occurring there. CVWD will be making every effort to encourage use of Colorado River water for irrigation thus reducing the recharge that will be necessary. They asked the Tribe to consider the other impacts that may be associated with not re-charging (e.g., increased pumping costs and intrusion of high salinity perched aquifer water). However, the proposed location of the recharge basin focuses exposure on the Tribe. The Tribe also raised issues in the letters about listed species and/or critical habitat at the Salton Sea that were not adequately addressed. There currently is no designated critical habitat at the Salton Sea itself. The Tribe is concerned that with this project any future critical habitat may have to be designated on their land. The Tribe also looks upon the fish in the Sea as a trust asset that is not adequately addressed by Approach 1. The Tribe sees recovery of the Sea as the only viable approach to addressing the ecosystem problems. CH2MHill provided an update on the area in the document they hoped to strengthen, and the technical session of the meeting ended.

In the **government-to-government consultation** the group had an open discussion of the project direction. The Tribe sees a dual responsibility for the Department in providing for the water transfer and restoring the Salton Sea. They are limited to groundwater as a sole source of their water, and they do not want to see the use proposed by CVWD impact this resource. The Bureau will continue to work with CVWD to identify a way to address the Tribe's concerns. The Service provided some background as to how Approach 1 was developed, but the advantages of Approach 2 are obvious from many standpoints. We will need all parties to accept the use of this water for the Sea as a reasonable and beneficial use if we are to be able to proceed with this approach. This includes the Department of the Interior. The Service and the Bureau will work

with the Solicitor's Office to identify a mechanism whereby comments to new information in the final EIR/EIS can become part of the public record. With that, the consultation closed.

Staff from the Service and the Regional Solicitor's Office met with legal counsel for IID on the Implementing Agreement on **April 16, 2002**. CDFG legal counsel participated by phone. The group went through the latest re-write of the document. The necessity of Certificates of Inclusion for the participating farmers was reiterated. IID's counsel will develop a sample contract that will be the functional equivalent of a Certificate of Inclusion for the Solicitor's review. The Service has not seen any language regarding the disposition of created habitats at the end of the permit. The closure of these habitats will have impacts that have not been addressed, and IID was to develop a list of options for those habitats to be incorporated into the HCP. The Solicitor stressed that this will be needed. The Implementing Agreement will also need to identify the mechanism of land preservation, and it must be acceptable to the Service. If the HCP is going to cover monitoring activities, the qualifications required for individuals carrying out those activities needs to be delineated in the HCP. Permit coverage for IID as lessor for land used for other than covered activities will not be provided. Documentation that the mitigation minimizes and mitigates the impact of the take to the maximum extent practicable is needed for all conservation strategies outlined in the HCP. The topic of assurances was discussed and resulted in debates on several fronts. These issues were deferred in order to continue progress on other areas of the document. Documentation of funding is still pending; it is supposed to be part of the application package. There also needs to be documentation that IID has the authority to carry out the actions described in the HCP. The attorneys will exchange another round of re-writes and schedule another meeting as appropriate.

On **April 17, 2002**, the HCP team took a tour of the upper reaches of the All-American Canal. This allowed the group to evaluate the effectiveness of the proposed desert measures. The team determined that vehicle speeds are likely to remain low due to the road condition in several areas. Much of the canal road in the upper reaches is set on a terrace of sorts between the surrounding habitat and the canal itself and does not appear to be particularly attractive for wildlife use. One covered species was observed during the tour (brown-crested flycatcher, *Myiarchus tyrannulus*).

The HCP team met again on **April 18 and 19, 2002**. In this meeting we attempted to wrap up as many of our outstanding items as possible. We have decided on a volume of water for mitigation by choosing the upper bounds of 60 ppt salinity being reached in the year 2030. This water can be delivered on a variety of schedules, but the volume obligation is set. All agreed that the water could stop sooner if the fish were gone before 2030. IID will also evaluate the additional volumes required if half or all of the water is used for soil leaching. IID responded to the concerns about water rights as a potential changed circumstance by stating they have command and control of the water, and it would not be subject to others' water rights claims. Relative to eminent domain, IID would re-establish the required habitat elsewhere if required as a result of eminent domain. We established time frames for this as part of our discussion. There is still resistance among the Service and CDFG to the 500 acre pond concept. Additional information was sought from the Bear River Migratory Bird Refuge on the density of white pelicans on their ponds. They have not

had any significant disease events among pelicans, but other birds have suffered from avian botulism, Newcastle disease and avian cholera. The staff there has observed pelicans and cormorants foraging in the same areas. We had an in depth discussion of the pros and cons of different pond concepts including a review of potential costs. No conclusion was reached regarding this issue.

Herbicide use will be dropped as a covered activity. Regarding pupfish drains and selenium, IID will maintain the current conservation strategy knowing that refinements may be needed prior to permitting. The desert strategy may be modified to delay flood related repairs to give spadefoot toads time to metamorphose into adults (if not precluded by health, safety and property damage concerns). Land use has been clarified in the HCP by adding a table of the specific covered land uses. In regards to the other 25 species, IID will incorporate these into the document per the direction from CDFG. The Service will have to address them as they deem appropriate. On fallowed lands, IID will have farmers implement some erosion control measures. IID is willing to commit that on their lands this will be a cover crop or ridge-tilling to try and enhance foraging opportunities for covered species. This will not address mountain plovers, but the need for mitigation may be so small as to not be practically mitigated at all. Nesting islands will be created to address gull-billed terns and black skimmers specifically. IID will consider addressing double crested cormorants by breaching the road to Mullet Island in hopes of maintaining its inaccessibility to terrestrial predators longer. The IT will evaluate whether additional measures will be required. In regards to Salton Sea monitoring, no effectiveness monitoring will be required with Approach 2. Only compliance with the required delivery of mitigation water will be needed. Approach 1 will be similar to what is in the text now and what has been developed under other strategies. Things that could be adaptively managed under the HCP include the species of fish used, the delivery methods and schedule, and possibly the acreage of ponds provided it does not exceed the maximum.

The HCP team met again on **May 6 and 7, 2002**. The resource agencies informed IID that the 500 acre pond proposal was not adequate. We are back to something on the scale of the original 5,000 acre proposal. We discussed dropping the stocking of tilapia into the Salton Sea with the ponds to become operation earlier instead. This was the preferred approach for CDFG. The pond development could be phased to allow for adaptive management of pond construction and operation. We are looking at the need for aeration, supplemental feeding, use of canal water, and hatchery supplementation as in-pond production is not likely to be adequate. In regards to Approach 2, IID insisted on a clause that would allow them to cease mitigation water deliveries if the fish were no longer present in the Salton Sea. They did not want to be obligated to make mitigation water deliveries after the fish are gone. The HCP needs to identify a method for monitoring this aspect. In our discussions of Approach 1, we focused on bird density in the ponds. Based on figures received from Bear River Refuge and the average numbers of birds, 5,000 acres would be an appropriate size. This does not account for amortization of size as we have done with the fish requirements. Concerns were raised that fish density would be too low to be attractive to the pelicans. We have no independent data on fish density that is attractive to

pelicans. There is a great lack of confidence that this proposal can mitigate successfully the impacts to fish-eating birds at the Salton Sea.

In our **conference call with the Principals on May 7, 2002**, we relayed the great uncertainty associated with the ponds. Given the unknowns, it is difficult to say if this approach will meet the permit issuance criteria. The added costs of canal water, aeration and the other requirements have not been considered adequately. The total for this approach is now over \$300 million. Given that there is still a rather large mitigation requirement with fallowing for the project (direct fallowing), it makes more sense to narrow the field of projects/mitigation to efficiency conservation with the hatchery/ponds and direct fallowing with mitigation fallowing. Use of Colorado River water for mitigation water should be acceptable provided it is part of the 4.4 million acre-foot apportionment for California. MWD raised concerns that other states might object to this during the period when the Interim Surplus Guidelines are in effect. Further direction is needed on this issue. CDFG agreed to work with the Service on making a decision as to whether Approach 1 could be permitted. The Service reminded the water agencies that in our determination we will consider if Approach 1 would minimize and mitigate the impacts to the maximum extent practicable and whether documented funding sources are available for this part of the HCP. Both agencies were comfortable with permitting Approach 2. Another meeting was scheduled, and the call ended.

On **May 8 and 9, 2002**, Service staff participated in a meeting to organize the response to comments effort. Master responses had been prepared for several subject areas, and some specific comments have been developed. Copies of these were provided to the Service. Given the uncertainty associated with the HCP approaches for the Salton Sea, no major revisions will be done pending the outcome of the Service/CDFG discussions. Responses will not be developed on Approach 1 until further guidance has been received. The approach will be updated based on the most recent discussions, but nothing will be finalized. Beneficial use of the water is still an issue under both approaches given they both call for use of canal water. This will need to be addressed. Approach 2 in its most recent form is problematic because the draft EIR/EIS considers the mitigation water for the term of the project as mitigation for other significant impacts (particularly air quality impacts). This issue will be re-evaluated by IID. If mitigation water is provided throughout the project, it will be done on an acre-foot to acre-foot basis. Salinity may reach the 60 ppt threshold in 2023 as predicted by the model rather than forcing it out to 2030 as in the current approach. The Service stated that this was done because IID wanted to stop providing mitigation water. A 1:1 match for 75 years is acceptable as an avoidance measure. Deferral of issues to the Implementation Team is being considered and legal precedent is being sought to respond to comments on this issue. Selenium in the drains was discussed, and the conclusion is that there is no feasible mitigation for these increases. Pupfish drains will be addressed per the HCP. Under Approach 2, mitigation water could be used to dilute the selenium concentrations in the pupfish drains. The baseline was a source of many comments and much discussion in the group. The group achieved a reasonable understanding of the assumptions, but the responses given need to be very thorough and clearly stated so that others can understand these concepts.

Other topic areas discussed include: growth-inducing impacts (master response pending), cumulative impacts (most comments focused on Mexicali), general project description issues, and Indian Trust Assets (which is being re-written). The Service's margin notes were also discussed as they were mentioned in the Service's comment letter. CH2MHill committed to reviewing the letter responses to assure that significant issues were addressed and responding to minor issues/questions in the errata. There was disagreement as to how CVWD's receipt of water would affect the volume of mitigation required under Approach 2. Additional model runs will be conducted and the outcome provided to the Service for discussions with that agency. The problems with air quality dominated the discussion on the second day suggesting that mitigation water for the term of the project might be the preferred approach. A decision is pending. Dust generated from construction and fallowed land can be addressed more easily through best management practices and are not considered a problem to address in the responses. The discussion briefly touched on the Salton Sea restoration, and IID is of the opinion that there are no impacts to that project given no project has been approved. The document does state that the scale will be different with and without the transfer. Following another brief discussion on socioeconomic issues, the meeting adjourned.

A conference call was held between the Service, the Bureau of Reclamation, the Bureau of Indian Affairs, and the Torres-Martinez tribe on **May 20, 2002**. The Bureau of Reclamation provided an update on the document schedule and how that can provide for additional time for government-to-government consultation if needed. Comments received on the Final EIS can be responded to in the Record of Decision (ROD) and will become part of the administrative record. The draft Programmatic EIR for the CVWD Water Management Plan is expected to be released in June. We discussed the decision-making process for the Salton Sea approach; CDFG is expected to provide specific input on this issue at a meeting on May 21st. The Torres-Martinez still have concerns about groundwater and air quality. They have not received adequate documentation of the groundwater model from CVWD to date. The Bureau of Reclamation will encourage CVWD to forward more information on to the tribe. Perchlorate is of concern and will be problematic because it has not been modeled. The Service agreed to forward information on the Salton Sea approach as it develops and to schedule other calls as needed.

The HCP team met on **May 20 and 21, 2002**, to discuss the screen-check version of the HCP and attempt to finalize the draft on all issues except the Salton Sea. We discussed the need for better documentation for the conservation strategies having met the "maximum extent practicable" aspect of the issuance criteria. IID objected given that this standard (by their interpretation) should only come into play if the adequacy of the conservation strategies is questionable. It is IID's opinion that they have proposed conservation measures that are more than adequate to offset impacts, and thus there is no need to demonstrate that the measures represent the "maximum extent practicable." The Service raised that possibility that additional avoidance/minimization measures may be required for maintenance of the existing All American Canal as an emergency conveyance; additional input from other desert staff is being sought. Per recent discussions on the Implementing Agreement, there will be no take coverage for IID as a lessor of lands used for activities other than covered activities. The Service will also not be

covering the application of herbicides. The Purpose and Need section of the HCP also needs to specify that a permit is needed to avoid a violation of section 9 of the Endangered Species Act. This language will be added. The measure to extend the useful life of Mullet Island (breaching the road bed while still flooded on either side) needs to be added to the Salton Sea strategy if Approach 1 is taken. Approach 1 should also clarify the aspect of addressing fewer birds for a longer span of time. With Approach 2, the avoidance does raise an issue in regards to permit coverage. IID is hopeful that both agencies can provide for permit coverage for avoidance just as they would if there would be quantifiable take. It should be feasible to provide coverage through acknowledgment of their avoidance of the impacts.

Some minor modifications were made to the species-habitat associations and some of the conservation strategies. The group reviewed the new measures for the "Other Covered Species" and recommended several clarifications, particularly relative to the bats. The Service has not yet made a determination as to coverage for these species. Several specific issues were identified that require input from the Service's Regional Office. The figures used for the commitments of water require thorough justification given the restrictions set forth in the No Surprises Policy. We discussed the possible scenarios under Approach 2 (mitigation water to maintain the Sea below 60 ppt through 2030 or mitigation water to match reductions throughout the permit term). One requirement drops with the use of Approach 2 either way (nesting islands), whereas the pupfish connectivity and shoreline strand/adjacent wetlands strategies would still be required under the 60/2030 scenario. Mitigation for the term of the permit would address all of these requirements, and this would also address other impacts including air quality. IID will need to make a determination as to which scenario best meets their needs.

On May 21, 2002, there was another Principals' Meeting at the CDFG Director's office. During that meeting CDFG informed the water agencies that the pond concepts developed to date would not meet their permit requirements biologically. We discussed the need for coverage of species for which impacts are avoided if the fallowing/mitigation water approach is utilized. This is very important to IID. There are still issues to be addressed relative to fully protected species and the Colorado River. IID is working with several environmental groups on these issues. These same groups would also like to see mitigation water for the life of the project. That would meet the mitigation requirements for the HCP. Additional discussions are expected with these groups.

A meeting of the EIR/EIS team occurred on May 22, 2002. At that point, IID had made the determination that only Approach 2 would be pursued for the Salton Sea. The focus of the discussion was which scenario would be implemented given that the current document calls for mitigation water for the life of the permit. IID would prefer a scenario that allowed them to stop the mitigation water if it is not required to address air quality impacts (after the HCP requirements have been met). The Service suggested that the 60/2030 scenario could be implemented, and the additional water to achieve that (over just matching the reductions) could be banked for the future. If mitigation water is required, the banked portion could be deducted from future requirements. This is very difficult to implement if IID does not want to commit to using only fallowing for water conservation. Maintaining flexibility in the conservation method would be

facilitated by a scenario that would only match reductions. This would require that mitigation water be provided for a longer period of time (to 2042 to match the model predictions for the No Project to reach 70 g/l salinity), and IID is evaluating the benefits/costs of maintaining the additional flexibility. IID is also concerned about elevation of the Salton Sea. To maintain the structural integrity of the dikes along the south end of the Sea, they would like the elevation to go down to at least -235'. This is what is predicted for the Baseline/No Project, but the 60/2030 scenario might slow the elevation reductions down. This will also need to be considered, and IID is developing language that would preclude any requirements in the HCP that could result in flooding of private properties. If this limits the ability to achieve the 60/2030 goal, a discussion will be needed that the proposal is the maximum extent practicable and why.

Several NEPA issues came up including the use of an abbreviated Final EIS approach. Given the magnitude of comments and the potential for changes, it is not the preferred approach. However, no other approach is deemed feasible given the schedule. Hearing comments and written comments are all being responded to, but individual comments will be referred to Master Responses as appropriate. Approach 1 will not be removed from the document, but the Errata will clarify that this approach is no longer being considered. The Service recommended a more comprehensive Master Response on the Baseline issue given the number of comments associated with this topic. An actual calculation of the baseline inflow figures would be helpful. Responses to all comments should be available for review in the first week of June.

The meeting continued on **May 23, 2002**, but Service staff were not available to attend.

On **May 29, 2002**, staff from CH2MHill contacted the Service to discuss the shoreline strand/adjacent wetlands portion of the Salton Sea strategy. Given the use of Approach 2, the concern was raised that we may need to reconsider the Baseline for this habitat type. If the impacts are avoided until 2030, it may be more appropriate to establish the Baseline at that time. However, given the need for an established commitment from IID, this approach is problematic. CH2MHill wanted to develop language that would not obligate IID to mitigate for impacts resulting from the actions of others. They committed to developing such language that would result in the monitoring beginning in 2030, but the cap will remain the acreage base on the information in the University of Redlands database as the best available information at this time. They also intend to include language that will call for re-evaluation of the appropriateness of the strategy at that point in time. This language has not been received from CH2MHill/IID.

Preliminary responses to the issues raised at the previous HCP meeting were forwarded by Service staff to IID and CH2MHill on **June 3, 2002**. Service staff recommended that IID consider these responses (although perhaps not yet complete) in continuing their refinement of the HCP. IID requested that the Service provide very specific guidance as to what is needed to finalize their HCP/permit application package as they do not have the resources to continue the negotiation process.

Service staff provided some assistance in finalizing the responses to comments, but time constraints limited our ability to participate in the process. Service staff provided comments informally on the Master Responses on **June 3, 2002**. Access to specific comments was available through the CH2MHill website, however, only a portion of the responses was accessible to the Service staff. Service staff provided informal comments on the Biological Resources topic responses that could be accessed on **June 6, 2002**. Informal comments were provided on the Hydrological Resources topic responses that were accessible on **June 7, 2002**. On **June 12, 2002**, the Service's Carlsbad and Regional Offices received copies of the completed responses to comments (on CD-ROM) for review. This included Master Responses and responses to the individual letters and testimony received. The Service was given until 4:00 pm on **June 14, 2002**, to provide the Bureau of Reclamation with comments on the responses. Due to the limited time for review, only a portion of the Master Responses and one letter were reviewed. Informal comments on these topics were provided to the Bureau by the deadline.

On **June 11, 2002**, a meeting took place between the Service, the CDFG and the Arizona Game and Fish Department to discuss issues related to impacts on the lower Colorado River from the proposed water transfer and related activities. Carlsbad Fish and Wildlife staff participated by phone to provide background information and to stay informed as to issues related to the transfer. The primary concern raised was that the biological conservation measures, while appropriate to offset impacts to federally listed species, are not adequate to mitigate all of the impacts on the lower Colorado River from the project. Arizona Fish and Wildlife Service staff acknowledged that the Fish and Wildlife Coordination Act (FWCA) process was not complete for the project and that it would be appropriate to address remaining Federal and State concerns as part of that process. Arizona Service staff planned to contact the Bureau of Reclamation in order to continue the FWCA process so that outstanding non-ESA issues could be addressed.

Staff from the Bureau of Reclamation and CH2MHill developed new versions of the Environmental Justice and Indian Trust Assets sections. Unfortunately, these were not provided to the Service for review until **June 14, 2002**. Comments were provided to the Bureau on these sections on **June 17, 2002** (the next business day). However, the responses to comments and the Errata sheets (including this new text) had already been mailed to the agencies that submitted comments. The lead agencies were concerned that it would be inappropriate to make changes to the text of these sections between distributing the responses to the agencies and IID's certification of the document as a Final EIR. This determination as to whether additional changes will be incorporated into the document will be made by IID counsel.

The Service and CDFG conferred via teleconference on **June 21, 2002**, to discuss the problems associated with the "pond approach" to mitigating IID's impacts on Salton Sea fish-eating birds. Several issues were identified including potential disease problems, concerns regarding consistent water availability, potential behavioral problems and associated legal liability associated with encouraging bird foraging in a pond setting, and the lack of an appropriate contingency plan should the ponds fail to mitigate the impacts. Uncertainties were also identified associated with the stocking of fish directly to the Salton Sea as it is not clear that fish could be stocked

successfully for the entire interim impact period identified by the model. There have not been adequate studies to identify the salinity thresholds for reproduction versus survival and growth to evaluate this for the tilapia currently inhabiting the Salton Sea. With this approach the full impact would be mitigated over the interim impact period, rather than spreading the mitigation over the entire term of the permit. This would result in a very large fish stocking obligation on an annual basis.

On **June 27, 2002**, the Service, CDFG and the water agencies met to discuss narrowing the scope of the HCP. Carlsbad staff were only able to participate in part of the meeting via telephone. The focus of the discussion was the possibility of dropping the white pelican from the covered species list. This would facilitate the process now, but it could be problematic if the species is listed in the future. Concerns were raised over the likelihood of incorporating fallowing into the project and the limitations on the use of Colorado River water for environmental purposes. The discussion included the limitations that potentially could be imposed by the Endangered Species Act as a result of a potential future listing.

The Service and CDFG had a follow up call on **June 28, 2002**, to discuss the implications of a shorter covered species list. We identified the problems associated with attempting to feed one fish-eating bird species and not others and the potential limitations of a Salton Sea stocking program. The length of the permit and the length of the obligation were also discussed. The length of the obligation can be based on the modeling or the results of field sampling, but the start and end dates should not be based on a combination of the two. There are nest site issues associated with some of the species on the covered species list that the agencies would like to see addressed.

Later on **June 28, 2002**, the Service met with the Bureau of Reclamation to discuss options for ESA compliance. All acknowledged that the HCP was the best approach, but this approach may not meet the deadline. A section 7 approach would focus on the listed species only, but other specific details are yet to be defined. The Bureau is developing a Biological Assessment (BA), and they also are planning supplemental documentation under NEPA. They are hoping to maintain both options (IID completes their HCP with mitigation for covered species versus section 7 consultation on the federally listed species) well into the process to allow IID every opportunity to move forward and complete their HCP, but the Bureau would like to have a contingency plan should that not be possible by the end of the year.

We followed up that call with a brief call to staff of the CDFG. We discussed the fish stocking approach as an alternative mitigation that could be considered to allow for on-farm and systems water conservation. The best approach to this mitigation is to base the timing on field sampling. We can focus the stocking season on the brown pelicans, but we have to consider the white pelicans where there is overlap in presence to assure that adequate forage will remain available for the brown pelicans. Double-crested cormorants may not need coverage given their status in California, but there are still concerns about gull-billed terns and black skimmers.

Service and CDFG staff met briefly via teleconference on **July 9, 2002**, to discuss the options relating to California brown pelicans. Mitigation in Mexico is problematic for CDFG because it does not maintain the species in California. Mitigation on the California coast is problematic because it may not address the management unit (population) impacted by the changes at the Salton Sea. The possibility of short term fallowing for water conservation along with a fish stocking program is still being considered as mitigation, but there is no way to guarantee that the duration of this activity will match the impacts as predicted by the model.

The Service, CDFG and the water agencies met via teleconference on **July 11, 2002**. The focus of the discussion was the brown pelican as the listed fish-eating bird of greatest concern at the Salton Sea. We discussed the numbers of brown pelicans using the Salton Sea versus coastal and Gulf of California numbers. We could not confirm CVWD's contention that the Salton Sea birds were only 1% of the population. We discussed the role of the Salton Sea for this species; its importance is based on the numbers of birds (3-4,000 annually) that come there. The concept of feeding the birds in Mexico was raised. This is problematic for CDFG to permit as there is no demonstrable benefit to brown pelicans in California; in fact we would anticipate a net decrease of this species in California under this scenario. This would also be problematic in that we would need to rely on another government to enforce the requirements of the permit. Any feeding scenario requires that enough fish be provided so that the brown pelicans receive the required quantity of fish while accounting for the foraging by other species that we know will occur. It may be difficult to take actions to enhance fish production or reduce fish utilization in the Gulf of California such that adequate forage could be guaranteed. This could require adjustments in the regulation of fisheries management in Mexico. It would also be difficult to document that the necessary benefits had been accrued.

The group also discussed the possibility of a short term fallowing program as part of the water transfer. The hypothetical scenario limited the water transfer to the first term of 45 years, and it included the exclusive use of fallowing for the water transfer for the first 5 years. Starting in the 6th year, conservation would occur through improvements in irrigation efficiency. Without seeing a prediction of the salinity and elevation changes under this scenario, it was difficult to determine what mitigation would be needed. IID was not offering mitigation water under this scenario, but the interim fallowing would reduce the speed of the salinity changes by some unknown increment. This would provide some additional time to plan a restoration project. The discussion was brief as a result of the lack of the necessary background information, but the agencies agreed to consider the possibilities in a future discussion.

Service staff participated in a conference call between the Assistant Secretary for Water and Science and the CDFG Director on **July 17, 2002**. The Assistant Secretary reported on the meeting that had just been concluded with the four California water agencies. The Assistant Secretary relayed to the Director that the water agencies were considering participation in the approach being developed by the Bureau. Given the short time frame remaining, it does not appear feasible to complete the HCP. Section 7 provides an option for ESA compliance, but the State needs to be included in that process. The Director expressed his deep concerns that the

differences between the section 7 and CESA requirements may limit the ability to completely address the CESA requirements through section 7 of ESA. The nexus for the section 7 is proposed to be a set of fish and wildlife conservation measures to be undertaken or facilitated by the Bureau for listed species as called for under section 7(a)(1) of the ESA. The desert pupfish, Yuma clapper rail, southwestern willow flycatcher and the brown pelican are to be addressed. Mitigation is a difficult issue for the brown pelicans as extra-territorial actions are likely precluded by time and may be precluded under CESA given the circumstances. Fish stocking to the Salton Sea has not been received well on any front. The 5-year fallowing proposal by IID is still being considered, but the benefits to the salinity of the Sea are quite limited. Coastal mitigation is of concern because that breeding group of birds is considered a separate breeding population from the birds that use the Salton Sea. Making changes to address forage availability is also difficult as it is outside the Service's jurisdiction. Section 7 offers an advantage in that it does not require legislation.

A follow up call occurred on **July 18, 2002**, that included the water agencies. The water agencies expressed a willingness to participate in the section 7 process; a formal recognition of that will be forthcoming in the form of a letter. All acknowledged the need for the Federal process to parallel the State process, especially given the difference in standards between the two. The project description will be a key aspect to bringing the State and Federal processes together. Voluntary conservation measures will serve as the core of the Bureau action, with the water conservation being addressed as cumulative effects. Given the difficulty in identifying mitigation for the brown pelican, additional work will be required to bring the two processes together.

Another call followed on **July 18, 2002**, between the Service and CDFG to discuss more information on the status of the California brown pelican. We discussed existing threats and potential beneficial actions, but off-site enhancements opportunities in California are limited. We briefly discussed the status of the de-listing action and upcoming research efforts on the species.

The Service conferred with the Solicitor's Office in Washington and the Bureau of Reclamation on their proposed section 7 approach via teleconference on **July 19, 2002**. The Service received clarification that the focus of the effort is the voluntary wildlife conservation measures, but that the section 7 analysis would need to include the interrelated effects of the water conservation measures that are part of the entire operational change on the Colorado River. The Bureau is currently developing the BA including the project description, so the discussion focused on general process issues. The Service will need to work with the Bureau in the development of the project description, and ultimately the effort will need to extend to CDFG to assure that the process is compatible with the State's. The need for the Bureau to complete an agreement with the water agencies that also triggers the need for the proposed conservation measures will tie the actions together as interrelated. We briefly discussed some of the issues with brown pelicans; the Service and CDFG are still working towards solutions that work under both sets of requirements. Coverage of the water agencies under the Incidental Take Statement can be extended if they have applicant status; we are waiting on official word as to their willingness to participate in the process. We briefly discussed Fish and Wildlife Coordination Act issues, and the Bureau was

willing to review their project description with that potential need in mind. They did state that most of these issues would be addressed through the NEPA process. The Migratory Bird Treaty Act will be addressed per the Section 7 Handbook. The intention is to address water conservation-related impacts only; broader maintenance issues will need to be addressed directly by IID. It was suggested that this aspect could be addressed after the deadline.

The water agency Principals met with the Director of the CDFG, the Regional Director of the Bureau, and Service staff on July 22, 2002. The Bureau provided a description of the information included in their draft BA. This includes a focus on voluntary endangered species conservation measures as the core of the project. The water agencies would be brought into the process through conservation agreements (these would be binding agreements). As participants they could directly implement some of the measures or could provide funding to the Bureau for these actions. As a result of their participation, the water agencies would be covered under the incidental take statement for their actions as part of the overall water conservation and transfer program (extending beyond just the fish and wildlife conservation measures). The measures included are based largely on measures taken from the draft HCP for the Yuma clapper rail, desert pupfish and southwestern willow flycatcher. The Bureau has made a no effect determination for the bald eagle, razorback sucker, and the mountain plover. Additional measures were proposed for the California brown pelican. This included a suite of actions that could be combined into a conservation program. The program would begin with surveys to better understand the use of the Salton Sea and its importance to this population of California brown pelicans. The conservation program would include a pelican conservation fund that could be used to increase breeding success by protecting breeding sites or by boosting forage availability, although the specific methods to be used have not been identified. The group discussed the possibility of implementing some of these actions in Mexico and possible avenues of carrying such actions out (e.g., the Trilateral Commission that includes the U.S., Canada, and Mexico has coordinated actions in Mexico that were funded by the U.S.). This process would provide the needed ESA coverage for impacts to listed species resulting from the project, but it would not provide any assurances to the Bureau or the participants. CDFG raised concerns over the need to quantify the take of brown pelicans so they can determine if the proposed program constitutes full mitigation. They also raised concerns that the use of this approach may jeopardize the current support of the environmental groups for Senate Bill (SB) 482 dealing with fully protected species under state law. Additional concerns were raised regarding the CEQA requirements for the project and the certified EIR for the project. It would not reflect accurately the mitigation being contemplated for the project, and supplemental documentation may be required. It may be possible to address this need through the Final EIS that has not been released. The SWRCB record also does not reflect this change.

We also discussed the potential role of interim fallowing to provide additional time for implementation of the restoration program. That would not be required for the project as described in the Bureau's draft BA, but could be incorporated into the project if that helps to meet state requirements. IID is only open to fallowing on such an interim basis. They are looking for some kind of assurances that the fallowing can stop after 5 years and they can proceed with

efficiency conservation. They are concerned about the current version of SB 482 requires following through the year 2030. The Bureau was very concerned about IID requiring legislation to provide the desired assurances for efficiency conservation. The water agencies were clear in that this interim following would not be implemented in order to revisit the permit process at the end of 5 years, only to provide the restoration program more time. Permitting needs to be for the duration of the transfer as required by the Interim Surplus Guidelines and the QSA.

The remainder of the meeting focused on the topic of coverage for state-listed species through the section 7 process. It will be necessary to analyze the impacts on state-listed species and provide for full mitigation of those impacts if CDFG is to issue a consistency determination based on the Service's biological opinion. A 2081 permit is also an option, but this requires more time and possibly more mitigation. Concerns were raised about other Salton Sea species that may be impacted, even to the point of future listing, but the water agencies responded that some of these other species have provided insurmountable hurdles and we need to move forward. The Bureau reminded the group that these other species will be included in the NEPA process. We discussed the need for further refinement of the measures pulled from the HCP as part of this expansion of the section 7. IID expressed the desire to still pursue the HCP as they are wanting the associated assurances. We discussed possible ways to divide the coverage between the two process: geographically (Salton Sea versus Imperial Valley) or functionally (project-related versus maintenance-related). The Service and the Bureau will confer with the Departmental Solicitors on the issue, and CDFG will confer with their counsel. The group identified one species (the California black rail) that should be addressed if a project-related consultation is going to move forward. Four other species will be considered. Staff from the Bureau, the Service and CDFG will evaluate the species and the project description to determine what will need to be added to expand coverage for the state-listed species. Fully protected species are still an issue, and the process cannot move forward if SB 482 fails. We discussed the possibility of legislation that would provide the environmental groups with a State and Federal "statement of intent" in regards to restoration of the Salton Sea, but that may not be possible this year. We identified specific tasks that were needed to resolve the various issues raised, and the meeting was adjourned.

Carlsbad Service staff participated in a conference call on **July 23, 2002**, to discuss the approach to finalizing the EIS. Staff from the Bureau, CH2MHill, and IID participated in the call. The document will be stripped of references to Approach 1 for the Salton Sea and Approach 2 will be revised to reflect that it is now maintaining 60 ppt until 2030. IID raised the concern that the document cannot reflect different conclusions from the previously certified EIR or they will have to re-circulate and re-certify the document. For the Service to adopt the Final EIS, we must be satisfied with the responses to all of the Service comments provided on the draft. If we are, the Service files a Notice of Availability and issues a Record of Decision in parallel to the process carried out by the Bureau. Given the time frame for review of the comments in finalizing the EIR, the Service was not afforded the opportunity for a comprehensive review of the responses to our comments. It will be necessary as part of the finalization of the EIS to conduct such a review so that adequacy can be assured and supplemental documents can be avoided.

Staff from the Service met with the CDFG, the Bureau, and the Principals from the water agencies on August 2, 2002. The focus of this meeting was ESA compliance. The Director of the CDFG pointed out that we aren't just dealing with ESA and CESA compliance. In order for the State to permit the project, SB 482 (the Kuehl bill) must pass. This will not occur if the environmental groups all oppose the approach we are taking. MWD raised the possibility of combining a group of different approaches that cumulatively would get us close to the concept of no impacts for 19 years. This included the substitution of water transferred from the Palo Verde Irrigation District (PVID) to MWD for the first 5 years of the transfer then ramping down to zero by the end of the tenth year. So called evapo-transpiration (ET) following would be used to manage lands and keep inflows to the Salton Sea at the baseline (this also avoids beneficial use questions). We agreed that the term "material impact" in SB 482 needed to be defined as this would determine more specifically how close the project needed to match baseline. IID would like to see the elevation of the Sea go down to reduce their liability associated with potential flooding of lands behind the levies at the south end of the Sea. The Bureau and the water agencies stated that there needs to be a way to permit this without a re-opener. This is difficult under section 7 of the ESA and only applies to the listed species. We were discussing standards for the mitigation when it was realized that the 19 year figure may have been used incorrectly. The resource agencies met separately to resolve this issue and determined that a 15 year period of no impacts to the Sea (i.e., keeping the Sea at baseline for the first 15 years of the project) would be appropriate minimization that the environmental groups might accept. Offsite mitigation would then be developed for the remaining impacts to the California brown pelican so that the fully mitigated standard could be achieved, and CDFG could do a consistency determination. This determination would be made again if the consultation process was ever re-initiated. The water agencies were still looking for a way to get assurances given the commitments in with the QSA.

We discussed the potential implications of this approach. CDFG felt that the requirements of SB 482 could still be met through this process. IID wanted to assure that the socio-economic impacts be addressed in the Imperial Valley if this approach was going to be implemented. The water agencies will need to provide a package that meets the baseline for the first 15 years and provide supporting model runs on it that identify the impacts to the Salton Sea of this approach. CDFG and the Service will then work to quantify the impacts and identify a set of mitigation measures that would fully offset those impacts. The Director of the CDFG was hopeful that the environmental groups would be satisfied with this concept. The water agencies questioned why section 10 and a 2081 CESA permit were not possible. They are a possibility but time is the critical factor. Section 7 and a consistency determination are possible by the end of the year, whereas a permit under section 10 may not be possible in that time. All agreed that the time frame for coverage would be the 75 years provided the conservation package was appropriate.

The Service, the Bureau and the CDFG met briefly to discuss the BA that had been submitted to the Service by the Bureau. The inclusion of the impacts of water conservation as cumulative effects is problematic as this does not allow us to cover them under the Incidental Take Statement. This will be addressed by the Solicitors representing the Service and the Bureau. The

BA also needs to address state listed species that may be affected by the project. Of particular concern are the brown pelican, the Yuma clapper rail and the California black rail which are also fully-protected species.

The Service, CDFG, CH2M Hill and the Bureau participated in a conference call on **August 5, 2002**, to discuss more specifics on the brown pelican. We all acknowledged that various constraints limit us to off-site, out-of-kind mitigation. The key is to determine the equivalence between the impacts at the Sea and the mitigation. There are many projects that have been identified by the American Trader restoration process that would benefit brown pelicans. Most of these are roost enhancements/replacements. We need to quantify the take that would occur at the Salton Sea. The current discussion focuses on first year birds. We need to look at the appropriateness of this assumption. At the conclusion of this process, we will need to have enough specificity to support making the necessary jeopardy/no jeopardy and fully mitigated determinations. The Bureau will put forth the conservation measures and will work with the water agencies to see that they are funded. There are no assurances as to cost with the section 7 process. The Bureau will have the obligation to see that the measures are implemented regardless of the funding agreements used. Although we don't anticipate take for all listed species (CDFG identified the brown pelican, desert pupfish, Yuma clapper rail and California black rails as the species of concern here), the BA should provide an explanation as to the specifics of why the other species are not addressed.

The Service, the CDFG, the Bureau and the water agency Principals met again **August 7, 2002**, to continue the discussion. Staff from the CDFG and the Service presented information on potential pelican projects that could be incorporated into the conservation measures. These focused on creating/enhancing roost sites on the California coast with special emphasis on Santa Barbara and San Diego Counties. The key is that we are addressing energetics which is the link between foraging and roosting. IID suggested that the CDFG has the jurisdiction to change fishing regulations to offset foraging impacts more directly. The next steps are to quantify the post-minimization impacts of the project and to specify enhancements that will offset the impacts of the take. The water agency proposal would constitute the minimization measures. The water agencies' greatest concern was cost.

We then moved on to the concept of matching baseline for the first 15 years. Several possible definitions were identified:

- matching the mean model output for the baseline,
- matching the confidence interval boundary on the baseline model output, or
- matching the project-related reductions directly.

The Service suggested that the last was the most defensible. IID would like additional elevation reductions to be considered to address flooding risk. The water agencies wanted to know what would happen if the inflow reduction matching did not result in measured salinities within the model predictions. This could result in a re-initiation of the consultation. IID asked if it would be

an unforeseen circumstance under section 10. IID suggested that we still pursue a section 10 permit albeit with a shorter covered species list.

IID does not currently support the 15 year baseline concept. Their Board has approved a 5 year interim fallowing program. Some model outputs were provided for this approach. IID stated that they are not willing to agree to the QSA cap without the monetary compensation that was to come with the transfer of water to SDCWA as would occur with the PVID substitution. The Bureau suggested a potential funding approach to offset this so that the PVID substitution could be included as the 5 year fallowing program is unacceptable. IID presented model runs for a 10 year and 15 year hybrid plan, but both fell short of the baseline projection. MWD also presented model outputs for their proposed package, but they were also slightly short of the baseline and required more fallowing by IID. The water agencies are scheduled to meet on August 8 to discuss and resolve these issues. CDFG will need a response before the upcoming hearing on SB 482. CVWD suggested that a commitment of funding from the state to address socio-economic impacts would be helpful. The water agencies provided their individual concerns but committed to trying to reach consensus.

Staff from the Service and the CDFG attended a meeting between the water agencies and the Secretary of the Resources Agency for the State on August 12, 2002. Secretary Nichols and CDFG Director Hight provided the water agencies with a summary of the meeting they had held with the environmental groups on the proposed approach for the water transfer. The environmental groups were open to the concept, but they were also looking for some commitment on the part of the State and Federal governments in regards to Salton Sea restoration. The groups apparently accepted that the 15 year concept is based on the baseline that several of them had objected to in their comments on the EIR/EIS. It was not clear whether they understood that we would be matching the mean of the baseline rather than the confidence interval boundary. The Resources Agency is hopeful that they can become a partner in the restoration efforts with the Bureau, and they are looking to issue the upcoming Alternatives Report jointly. A joint policy statement or Memorandum of Understanding (MOU) are possible mechanisms that could be used to establish this relationship. Such mechanisms are much more likely to be completed by the end of the year than additional legislation on the topic. The topic of socio-economic impacts was also raised, and Secretary Nichols is waiting to receive input from Imperial County on the types of projects that they would like to see implemented to address these impacts. The State is not likely going to be able to provide funding, but it may be able to provide support in the form of waiving taxes/fees to facilitate the needed infrastructure.

The discussion then moved on to the pelican proposal. The Service and the CDFG are still pursuing additional information on the pelican roost concepts, and additional support in the form of engineering expertise will be needed. The SDCWA had made some contacts with the Navy on the Zuniga Point option that they will forward to the Service. The water agencies have identified seven potential scenarios to get to the 15 years at baseline. They were not prepared to share any specifics, but they hoped to have this narrowed down to a single package by August 26, 2002. This package will include a flexible combination of fallowing, PVID substitution, and

groundwater extraction to get to the goal of baseline for the first 15 years. They will be running the scenarios through the Salton Sea model to narrow the field. At the same time they are trying to come to consensus on the quantification of the economic impacts.

IID reminded the group that they are still interested in completing the HCP for the Imperial Valley. They do have concerns that have not been addressed (species coverage, assurances) in our current focus on the Salton Sea. IID would like to meet with the Service and CDFG to resolve the remaining issues. MWD also acknowledged that there are still issues that need to be resolved relative to the action on the Colorado River with CDFG.

Following the meeting with the water agencies, Service and CDFG staff met to discuss where we go from here. Additional CDFG staff resources were identified to assist in getting cost estimates for the pelican roost projects, but staff was instructed to focus on the biological justification for the approach. We were in agreement that our focus for these projects should be on creating new roost habitat, and projects that restrict recreational access will not be included. We need some level of assurance that the identified projects will be implemented. Assurances will not be possible given that we are dealing with section 7 on the federal side, and they will not be providing a conservation strategy for the Salton Sea in their HCP. Completing the "in-Valley" portion of the HCP will still be difficult in the time remaining. We will need to determine the appropriate time for public review when the Notice of Receipt of Application is published.

The Service, the Bureau and CDFG met on **August 22, 2002**, to discuss the BA. We began by going through the discussion on the Yuma clapper rail and identifying the changes that were needed. The use of the 21 acre figure was apparently in error, and it is the Bureau's intention to create a total of 73 acres of managed marsh. Of this acreage, 31 acres are for salinity-related impacts and 42 acres are for selenium-related impacts. We agreed to a 10 year time frame for completion of the marsh. The Bureau committed to water of the same selenium concentration as Colorado River water or water that was of a lower concentration than a future water quality criterion that had received a "No Jeopardy" determination from the Service. As the main components of this strategy were substantially similar to the HCP strategy, no other changes were made. We also discussed long-term management and agreed that management should be in perpetuity for that acreage associated with permanent changes in the irrigation system. For the remaining acreage, we agreed that this would need to be addressed prior to the end of the project. The biological opinion will not include take coverage for closure of the wetlands.

We had a more lengthy discussion on the southwestern willow flycatcher. This approach should consider the latest research on suitable breeding habitat. The Bureau has access to this information, and it will be incorporated into the measure. We discussed some of the complications that may be associated with the surveys required for this approach. One problem is that we are lacking key information in regards to the timing of changes associated with the 15 years at baseline concept. Without that we were not able to specific time lines for the monitoring. We agreed that the initial evaluations and baseline surveys need to occur before any water

conservation actions that could impact the potential habitat start. The specifics of the monitoring will be developed in the monitoring plan that will be subject to Service and CDFG approval. Another complication involves the fact that normally projects requiring surveys that employ tape-recorded calls address that take within the project biological opinion. The Bureau was not comfortable with this approach and will consider the additional requirement that all surveys will be conducted by personnel with 10(a)(1)(B) research permits from the Service. Another alternative is to address all suitable habitat and not conduct breeding bird surveys. The Bureau will consider this approach. The BA also needs to strengthen the argument that there are no impacts associated with loss of migration habitat. The Service and CDFG referred the Bureau to the "nearest patch" analysis done for the Coachella Canal lining project.

The California black rail will be added to the BA. The acreage of marsh mitigation is believed to be conservative enough to include them given the salinity acreage is based on the most sensitive vegetation and the selenium acreage was based on total vegetated acres. The mountain plover needs additional analysis to reflect its specific habitat preferences and the possibility that only hay crops may be fallowed. The Bureau is considering modifications to the determinations for the mountain plover and the razorback sucker to may affect, not likely to adversely affect, as they are more defensible. The razorback sucker has not been found in lateral canals based on the collective memories of those involved in the discussion, but they have been found in the major canals so impacts from canal lining may be possible.

Following this discussion, the group participated in a call with several pelican experts and representatives of the water agencies. The purpose of the call was to attempt to quantify the impacts to brown pelicans that will result from the early loss of fish at the Salton Sea resulting from the water transfer project and to quantify the benefits that may be associated with roost enhancement projects on the southern California coast. An economic analysis was used (as is done in natural resource damage assessments) to determine an equivalency between bird impacts at the Salton Sea and bird benefits on the coast given an assumed life of the enhancement project. Based on the discussion, it appears that the primary impacts are to birds that disperse widely after the breeding season. Juveniles tend to disperse more widely than adults, and it is possible the projects on the coast could be designed to specifically target this age group. They tend to prefer estuary areas over the open water off the coast. It should be possible to do wetland enhancements that will increase fish production as well. Service and CDFG staff will continue to gather information that will assist us in quantifying the impacts and the benefits needed to fully mitigate those. The mitigation standards will need to be developed from this information in case specific projects cannot be identified in time to complete the consultation. On August 23, 2002, Service, CDFG and Bureau staff visited the Buena Vista Lagoon to discuss enhancement possibilities that could provide for pelican roosting and/or foraging. Given existing water quality problems, a more comprehensive restoration is needed in order to accommodate brown pelican use at the lagoon. It is still being considered, but existing uses could not be impacted as a result.

A conference call was held to discuss the status of the Final EIS on August 26, 2002. Staff from the Service, Bureau, IID and CH2MHill participated. The Final EIS is on schedule and will be

delivered in a draft from to the Bureau and the Service on **September 16**. Currently, **5 days are scheduled for review** of this version of the document. Most of the call was focused on the Service's recent comments on the Final EIR. We discussed the strategy for this document, and the Bureau and IID acknowledged that supplemental documentation will likely be needed given the potential changes associated with ongoing negotiations. By finalizing this document now, the supplemental document can be tailored to address only the changes. We addressed the other Service comments and identified a strategy for each. These will be discussed internally by Service staff and management.

The Service, Bureau and CDFG re-convened on **August 29-30, 2002**, to continue the discussion on the BA. We discussed the need for additional clarification on the acreage of tamarisk scrub that is being addressed. The Service and CDFG indicated that the HCP was addressing all of the tamarisk that was impacted, and we were not clear on the document's inclusion of only a portion of the tamarisk in the "project area". We then went on to discuss the desert pupfish. The lack of a refugium pond appeared to be the largest gap relative to what had been agreed to in the HCP. The Bureau agreed to add this to the first measure for pupfish. We also discussed the need to consider a lower salinity threshold and the possibility that unseen physical barriers may exist and become a problem for pupfish movement as the elevation of the Sea goes down. The Bureau agreed to these changes as well. Language will be incorporated from the HCP to indicate more specifically what monitoring will be required, and a requirement for a monitoring plan that is approved by the Service and CDFG will be added. The Service suggested that the document needed additional clarification on how it was decided that species would be included or not included in the different levels of analysis. The Bureau agreed to re-evaluate the language that is currently in the document and add details as needed.

We moved on to the topic of brown pelicans. One of the key steps at this point is to decide how to quantify the impacts to brown pelicans. The Resource Economic Analysis (REA) approach conducted by CDFG is workable, but we need to refine the starting number and the "decay" rate. We talked about various approaches and settled on taking the mean of the available peak counts. We did not use a mean across the season because the use of a mean would not address the turnover of birds between surveys. The use of bird-use days was also considered, but this was thought to unnecessarily complicate any calculations. As long as the same units are used for the impact and the benefit, either unit should give similarly representative results. Based on input from the pelican experts, we do not have clear evidence that either the forage base or roosts sites are limiting. We do know that when roost sites with the appropriate characteristics are made available, the pelicans do use them. With this premise in mind, there are gaps in the availability of roosts along the California coast that we can consider in developing a list of potential projects. As long as the roosts are available year-round, migratory pelicans are expected to use them. We discussed that the impacts may not be equally distributed across all brown pelican colonies in the Gulf of California, but they may be focused on two or so colonies in the northern Gulf based on behavioral observations of feeding at the Salton Sea and in the Gulf. We discussed the need to ramp down the numbers according to some schedule of loss, rather than using the assumption that bird use would instantaneously drop. Using this approach we developed a schedule of pelican

loss by assuming that one third of the birds would be impacted by the change in salinity from 50 to 60 ppt salinity and the other two thirds by the 60-65 ppt change. A small residual number are expected to stay at the Salton Sea. This schedule will be plugged into the REA to determine the mitigation requirement. The number of birds to be addressed by the mitigation depends on the life of the mitigation project. This is still being considered.

We briefly discussed other more general comments. The Bureau agreed to evaluate or comments and incorporate changes as appropriate. It is not clear if a new BA will be provided at some point, or if the changes will be provided in the form of "errata" to update the original document.

A follow up call on the Final EIS occurred on **September 3, 2002**. The topic of the uncovered species and maintenance impacts was discussed, and CH2MHill committed to adding further clarification regarding the relationship of operations and maintenance to existing conditions to the response to the Service's comment. Service staff was asked if the Service concurred with the other resolutions proposed, but feedback has not been received from the California-Nevada Operations Office. The Final EIS is still on schedule for delivery in two parts: Volume 2 on **September 9** and Volume 1 on **September 16**. Comments are due to CH2MHill by Monday morning, **September 23, 2002**.

A brief call was held between the Service, the Bureau, and CDFG to update the status of efforts to move forward on the consultation on **September 5, 2002**. It was brought to the resource agencies attention that IID had contacted the Bureau raising concerns about the scope of the section 7 consultation. IID is still hopeful that the HCP can be completed for the Imperial Valley species and a section 10 permit can be issued by December 31, 2002. IID is elevating the issue with the Service. We have received brown pelican counts for Buena Vista Lagoon, but they also included the beach area and so are of limited value. We have received the results of the latest run of the REA for brown pelicans, and the scale of restoration is on the order of 552 pelicans for the 2030 time frame or 330 for the 2078 time frame. The Bureau will provide revisions to the BA in the form of errata sheets. This will be ready soon for the conservation measure updates we have discussed. During a brief follow up call between the Service and CDFG, we identified the need to develop a restoration package that addresses both roosting a foraging needs. To the extent possible, it would make the most sense to do these in the same location. Should it be necessary to do roost and fish enhancement projects separately, we need to maximize the overlap in benefits. We will use the scale from the REA as a starting point.

A brief conference call was held on **September 16, 2002**, to brief Washington Office staff on the status of the IID water transfer ESA compliance. Issues remain in regards to the what aspects of the project will be covered under section 7 and what will be covered under section 10. The time line is not likely amenable to the completion of both a section 7 consultation and an incidental take permit through section 10 this year.

Service and CDFG staff held a conference call on **September 18, 2002**, to coordinate on pelican mitigation concepts. Staff were in agreement that several of the lagoons in San Diego County can

be considered potential mitigation sites, but some may only provide roost opportunities rather than both roost and fish enhancement opportunities. Space, forage base, and water quality constraints may limit the number of pelicans that can be accommodated in any of these settings. San Diego Bay may offer the best opportunity for a roost in an area with a known fishery resource. We also discussed the need for additional CEQA and NEPA analysis of groundwater pumping if it is to be incorporated into the project mitigation.

Carlsbad staff had a conference call on **September 18, 2002**, with staff from the California-Nevada Operations Office to discuss the letter received from IID dated **August 5, 2002**, and possible approaches to resolving the outstanding issues with the HCP. Seven issues were identified in their letter, and several are complex and require additional evaluation before a solution can be developed.

The Service and CDFG participated in a meeting/conference call with IID on **September 25, 2002**, on outstanding issues related to the HCP. Although final resolutions were not reached, a plan to address each of the issues was developed. The issues discussed include the following. 1) The current proposal for permitting take of Couch's spadefoot toad is lacking a sound basis. We discussed with IID the need to develop conservation goals that they would have to meet prior to the take being authorized. This has been done on other HCPs. These goals would be biologically-based and would support the Service's impact analysis. 2) Permitting take of the other covered species is similarly problematic. We concluded that a similar approach was needed for this group of species as is described above for the Couch's spadefoot with the development of discrete conservation goals. IID agreed to re-evaluate their list and consider removal of species with no known occurrences in the HCP area. 3) The disposition of managed marsh after permit expiration was also discussed. The Service offered the possibility of turning the land over to a third party and water at the agriculture rate as a possible resolution. IID will consider making this commitment of the land to a third party and water at the agricultural rate, but they did not want to be required to continue managing the marsh if no other land management entity agreed to take it. The Service needs to determine if the offer alone is an adequate commitment. 4) Another issue was changed and unforeseen circumstances and where exotic species fit in. We did discuss this issue, and IID agreed to have their consultant try to clarify the commitment with input from the Service on where the ambiguous language occurs. They also agreed to incorporate language into the HCP that identifies the Management Plans as the source of the standards for actions related to routine maintenance and responses to changed circumstances. These will not be developed until after the permit is issued, but they will require Service approval. 5) We also discussed development of justifications that the conservation strategies constitute the "maximum extent practicable". IID agreed to provide additional language in the HCP that gives some indication of the extent of the mitigation and its cost to justify that it would not be reasonable to ask for more. The Service committed to an internal discussion on the issue to determine if this would be adequate to meet the issuance criterion. 6) We also have a problem with addressing third parties and the lack of mitigation requirements from the participants in the program. IID agreed to consider timing restrictions on physical modifications included in efficiency types of conservation as potential minimization measures. They stated that they would not impose requirements on

farmers conserving water through fallowing. The Service recommended that they include a justification for the lack of minimization measures by the farmers in the HCP. 7) The other item that we did discuss was the quantification of incidental take. The Service was clear that take would not be permitted in cases where there was no basis for claiming incidental take. IID requested that take be quantified in habitat parameters to the maximum extent possible, but the Service countered that numbers will be used to the extent that we have the ability to quantify them.

Staff from the Service, CDFG, and the Bureau had a brief coordination call on **September 25, 2002**. In this meeting we identified the benchmark events that keep us on schedule and the significant gaps in our information that remain. The Bureau identified the information that they will be providing in the Errata for the BA as part of this discussion. Resolution on the Federal nexus is still pending.

The Service and CDFG participated in a coordination call on **September 27, 2002**. Bureau staff joined the call in progress. During the call we discussed five issues: brown pelican mitigation for the consultation, an updated project description including a Federal nexus, use of East Mesa groundwater, the time lines for the remainder of the consultation process, and selenium concerns for the desert pupfish. The primary issue for the brown pelican is determining what projects will fully mitigate the impacts. The Bureau agreed to follow up with the Washington Office staff on the Federal nexus issue. Although we will continue to track the potential for use of East Mesa groundwater, it will not be considered part of the project at this time. The consultation period officially closes **October 23, 2002**, and the Bureau will attempt to have the updated project description to the Service by that date. The biological opinion is due **December 9, 2002**. The Service will be working internally to more closely evaluate the water quality issues with the desert pupfish.

A conference call was held among the Service, the Bureau, IID and CH2M Hill on **September 30, 2002**, to discuss the water quality results being developed for the Final EIR/EIS. The results indicated an unexpected result for total suspended solids (TSS) in the 75-year run for Alternative 4 (all fallowing). Because the modelers could not explain the result to everyone's satisfaction, it was decided that it would be best to use the original 12 year results and discuss the conclusions qualitatively. In the discussion the margin of error for this constituent was considered to be rather high suggesting that the presumed benefit seen in the 12 year model results was as questionable as the results in the 75-year run. The results will include an explanation of potential modeling error.

Staff from the Service and CDFG participated in the water agency meetings held at the MWD headquarters and facilitated by Assembly Speaker Emeritus Hertzberg on **October 1 and 2, 2002**. The purpose of these sessions were to develop terms to address the remaining areas where agreement had not been reached. Three main topics were addressed by subgroups within the larger meetings: designing the fallowing program, addressing socioeconomic impacts, and achieving environmental compliance. In between sessions, the Service and CDFG met to discuss outstanding issues including the brown pelican mitigation program, the PVID fallowing program,

and coverage of the PVID-MWD transfer or lack thereof under existing Federal and State permits and CEQA/NEPA documents. No state permits have been issued for Colorado River impacts as the applications will not be submitted until SB 482 is in effect with the signing of the QSA.

The farming group developed an approach to fallowing called "low impact fallowing" as it reduces socioeconomic impacts. This fallowing would place more emphasis on the field crops rather than the labor intensive vegetable crops. This will have to be considered in analyzing the impacts of the program on species reliant on field crops for foraging.

The focus of the second day was the development of the term sheet for environmental compliance. Three basic categories of mitigation were considered: up-front commitment of funds, post-termination mitigation requirements, and new listings/unforeseen circumstances. Agreement was reached between the water agencies on the obligations related to the first two, but the third issue was problematic. IID was particularly concerned about this issue given the reduced coverage associated with a section 7 consultation versus a section 10 permit. IID is still pursuing the HCP, and the QSA (as written) will not become effective until the permit is received. This would not preclude signing by December 31, 2002. CDFG raised concerns over the need for additional CEQA analysis with a change in mitigation, but IID offered to provide documentation that they have adequately bracketed the impacts. The Service will likely need additional NEPA analysis prior to issuing a section 10 permit. One outstanding issue remaining was whether the QSA terminates should the water transfer have to stop for environmental reasons or should it be suspended until the impacts are addressed and the transfer can resume. IID prefers the latter because it protects them from challenges regarding beneficial use.

On October 4, 2002, Service staff met with CDFG and Bureau staff to discuss brown pelican mitigation. After discussion and input from CDFG, it was decided that the pelican mitigation should include at least two roost sites. These roost sites will require use by a minimum of 100 pelicans each in 3 of the 5 years worth of surveys scheduled to begin one year after project completion. The total number of pelicans addressed will be based on the salinity curve for the 15 year plan and the model output from the REA based on that schedule. For full mitigation a 3:1 ratio will be required by CDFG. The estimated total was approximately 1,000 birds, but the final total is still pending. We suggested that it would be appropriate to have the projects in place by 2010 so that the 5 years of surveys will be complete by the end of the 15 year plan period. This number of birds is required for the life of the permit. Long-term maintenance, monitoring, and adaptive management should be included as part of the program. The Santa Barbara coast and San Diego Bay were identified as the appropriate areas for the two roosts as these are the largest gaps in roost availability for brown pelicans. If these two projects do not meet the success criteria, additional roosts will be required in one of the identified sites or other appropriate sites identified in the future. A barge was recommended for the Santa Barbara site, and floating structures that provide roosts but do not shade the area below were recommended for San Diego Bay.

A second meeting was held on **October 4, 2002**, to review with IID the conservation measures in the Bureau's project as compared to the HCP strategies. There is a high degree of overlap between the two, but the Bureau's program does not provide for coverage of maintenance activities. IID raised the point that some of the measures, such as pupfish connectivity measures will require maintenance. This will be considered. IID would like the conservation program elements to mesh with the future HCP to facilitate the transition. IID also raised concerns about the elements that were added as part of the conservation measures under the Bureau's program and what responsibility they might have for those actions if a future HCP supercedes the section 7. Additional discussions will be required to resolve this issue. The Bureau committed to incorporate additional detail from the HCP on monitoring and management of the conservation measures. IID will discuss internally if they would like to pursue HCP coverage for the brown pelican or other Salton Sea species, but they are aware that the current program would only cover brown pelicans.

A short conference call was held between the Service, CDFG and the Bureau on **October 11, 2002**. During this call we discussed the pelican mitigation package, and it was decided that the information would be shared with the water agencies for their consideration at the upcoming "Hertzberg" meeting scheduled for **October 12-15, 2002**. The Bureau is concerned that it will be necessary to estimate the costs associated with this in order to develop conservation agreements with the water agencies. By providing the concepts to the water agencies, they will be able to tap their engineering resources to develop cost estimates. We discussed the section 7 approach, and it was decided on a recent conference call that the water conservation activities will be considered interrelated/interdependent with the voluntary fish and wildlife measures undertaken by the Bureau. Service staff from the California-Nevada Operations Office participated. The analysis of the California black rail (as a "state-only" listed species) will be considered technical assistance. Given that the conservation measures for the Yuma clapper rail are the same, there will be enforcement capabilities for these measures. We discussed that the incidental take exemption will need to be contingent on the conservation agreements with the water agencies being signed and the conservation measures being implemented. We went over the schedule for the consultation and the NEPA process. The final information from the Bureau will be submitted to the Service on **October 23, 2002**, and a draft of the biological opinion is due to the Bureau on **November 25, 2002**. The final signed biological opinion is due **December 12, 2002**, so that the Consistency Determination from CDFG and the Record of Decision (ROD) by the Bureau can be completed prior to **December 31, 2002**.

The Service, CDFG, Reclamation and CH2MHill held a conference call to discuss the desert pupfish and selenium on **October 16, 2002**. The primary concern is that the existing information suggests that the selenium concentrations within the drains that will result from the project may pose a jeopardy to the pupfish. The focus of our discussion was to find a way to use monitoring to identify a problem before it becomes too serious to manage. Concerns were raised about the model predictions as many drain concentrations have already exceeded the predicted levels. There is great uncertainty associated with the ability to predict changes because the program is voluntary, and we don't know which fields will be involved. Because of the structure of the 15-

year minimization plan being discussed, we will have time to collect field samples and establish the selenium baseline in the drains, conduct the laboratory studies on pupfish sensitivity to selenium, and do baseline surveys consistently throughout these drains to get a better understanding of their use of the drains. Concurrently with those activities, we hope to be able to develop a more consistent method to survey for the species. The group agreed that the time frame of the ramp up of on-farm and system conservation should allow for a monitoring program to identify problems for adaptive management rather than simply document the loss of pupfish in the drains. Given the nature of the program, we will probably not be able to prevent selenium contamination in the drains, but we will have options as to how to treat for it to reduce pupfish exposure. Ultimately, we hope to have a trigger number, either in surrogate fish tissue or in prey items, that can be measured simply and used to determine when adaptive management actions are necessary.

Another call was held on **October 16, 2002**, to discuss the status of the HCP with the Service, CDFG, and IID participating. Rather than discuss specifics of the HCP, we discussed the process that we will be undertaking upon completion of the consultation. The condition now on the QSA is that the HCP is to be complete and the permits issued within one year of the QSA being signed. This is still an ambitious time frame, but it can be met with a concerted effort. IID is still the applicant, but the other water agencies will be taking a much more active role. However, IID does not want to re-open issues that they felt were closed. IID also wants to maintain control over their operations, and they would like to be more involved in the consultation with the Bureau. On the PVID aspect, MWD does not feel they need permits for the in-valley activities.

A brief conference call was held between the Service, CDFG and the Bureau on **October 17, 2002**, to discuss the methods used to quantify the loss of brown pelicans at the Salton Sea. It was decided to put more emphasis on the loss of tilapia rather than the other fish species because these other species are believed to make up a very small part of the pelican's diet. Rather than assume 1/3 loss of the population from 50 to 60 ppt and 2/3 from 60 to 65 ppt, we will assume 10% loss from 50 to 60 ppt and 90% (less the remaining 25) from 60 to 65 ppt. This will be incorporated into the new REA.

Staff from the Service, CDFG, and Reclamation met with staff from IID, MWD, SDCWA, and CVWD to discuss the section 7 consultation on **October 18, 2002**. The purpose of this meeting was to familiarize the water agencies with the voluntary conservation measures that they will be funding as part of the conservation agreements. As we discussed the measures, several issues were raised. With the pelican mitigation, SDCWA identified the need to let the date the obligation must be met by slip if significant numbers of brown pelicans continue to use the Salton Sea longer than we had anticipated. They did not object to the use of the REA, but SDCWA and MWD objected to the 3:1 ratio for full mitigation. This will be raised to higher levels in CDFG. We discussed the pupfish conservation measures, and IID counsel identified the need to examine how these measures might conflict or relate to the State Water Resources Control Board's draft order as it relates to selenium concentrations in the drains. MWD and SDCWA were very concerned about the water quality requirements for the created marsh as too limiting. They don't see this as a beneficial use of Colorado River water. The Service stated that we cannot approve

mitigation, including mitigation for selenium impacts, that involves the use of selenium contaminated water at levels believed to cause direct impacts to the species being addressed by the mitigation. CVWD identified the potential to use tertiary treated wastewater rather than Colorado River water which is acceptable provided it does not result in other problems. We discussed the role of the consultation process versus the HCP process, and the water agencies would like to see language in the biological opinion that describes how the take exemption in the biological opinion and the incidental take permit would function given they overlap. IID and CVWD identified the need to see the conservation agreement(s) and the estimated costs for these activities. Reclamation is working on developing those. IID also asked that operation and maintenance activities be included in this process as necessary for carrying out the requirements of the project, including delivering drain water to the Sea. They are anxious to move forward with the HCP as they do not want long-term involvement of Reclamation and the other water agencies in their day to day operations.

Per a brief phone conversation with Bruce Ellis of the Bureau on **October 23, 2002**, the addition of rail surveys to Rail Measure 3 and the word "monthly" to the sentence on brown pelican surveys in Brown Pelican Measure 1 were approved.

A meeting was held on **November 26, 2002**, among the four water agencies, the Service, CDFG, and CH2MHill to begin the next round of discussions on the water transfer HCP. At the request of MWD, SDCWA, and CVWD this meeting was to update their staffs; no discussions of how to resolve issues took place. IID had prepared a draft schedule that provides benchmarks in order to complete the permitting process by the end of 2003. Concerns were raised that inadequate time was made available to resolve all issues with the HCP, but the deadline may slip if negotiations extend beyond mid-February. The other three water agencies asked to be provided with copies of the current form of the HCP and IA documents along with copies of pertinent correspondence. IID will provide this information. The group reviewed the list contained in IID's August letter to the Service. The nature of these issues should not preclude completing the process on schedule given that some work has already been done to address these issues. CDFG will need to provide input on how SB 482 figures into the process and what the specific requirements/changes will be. The Service committed to seeking guidance on whether a 60- or 90-day review period will be required for the HCP given that it has already been out for public review. This will depend, in part, on the changes that are made from the previously-released version. Another issue that will need to be resolved is whether or not the Salton Sea species are included. The role of the current section 7 should be addressed in the biological opinion being drafted for the Bureau relative to the long-term desire to have those conservation activities fall under the section 10 permit that would be issued relative to the HCP. The Service is developing the appropriate language.

A conference call was held between the Service and the Bureau on **November 27, 2002**. This call provided an opportunity for the Service to update the Bureau on the status of the draft document. The Bureau brought to the Service's attention their concerns about how the fish and wildlife conservation measures and the water conservation activities may be characterized in the draft. We discussed the application of the concept of interrelated effects and concluded this could be

used to characterize the water conservation activities. We also discussed the term of the biological opinion. It will remain in force until the incidental take exemption is no longer needed as a result of the issuance of an incidental take permit. We discussed some of the terms and conditions and the addition of new commitments. This is within what the regulations allow provided these additions constitute minor changes and provide for the avoidance/minimization of incidental take. Some of the standard language in regards to the Bureau's ability to enforce the terms and conditions would need to be reconsidered in light of their role in this process. The Bureau did see the need to provide oversight of documenting the implementation of the measures. The conservation recommendation needs to be re-worded to take into consideration that Congress has only authorized Reclamation to complete studies and pilot projects. We discussed the mountain plover and the difficulties we are having completing the analysis because we are lacking key information regarding this species' winter habitat requirements. Additional studies are required to gather this information in order for us to complete the conference. The Bureau requested that we not conference on that species at this time. Given the current HCP schedule, it will be possible to consider this species needs in the HCP prior to any major changes in the agricultural activities in the Imperial Valley associated with the water transfer. The types of management actions likely to be required fall more appropriately under IID's authorities than those of the Bureau. This change will be reflected in the draft biological opinion submitted to the Bureau on **December 2, 2002**.



CONSERVATION AGREEMENT

AMONG

THE BUREAU OF RECLAMATION, IMPERIAL IRRIGATION DISTRICT, COACHELLA VALLEY WATER DISTRICT, and SAN DIEGO COUNTY WATER AUTHORITY

This Conservation Agreement regarding implementation of a voluntary conservation plan for listed species in and around the Imperial Irrigation District, Coachella Valley Water District, and Salton Sea area is entered into this 10th day of October, 2003, among the United States Department of the Interior, Bureau of Reclamation (Reclamation), the Imperial Irrigation District (IID), the Coachella Valley Water District (CVWD), and the San Diego County Water Authority (SDCWA).

RECITALS

A. With the participation of IID, CVWD and SDCWA, Reclamation has initiated a voluntary program (the "Species Conservation Program") for the conservation of four species listed pursuant to the Endangered Species Act (ESA), Yuma clapper rail, desert pupfish, southwest willow flycatcher, and California brown pelican (the four species are referred to herein as the Listed Species), on lands comprising the approximately 500,000 acres of IID's service area in Imperial County, California, the Salton Sea (including adjacent areas in the Coachella and Imperial Valleys), lands owned by IID outside IID's service area that are currently submerged by the Salton Sea, the lower Colorado River Valley and the Coastal California range of wintering California brown pelicans (the "Conservation Area"). The Species Conservation Program is pursuant to Section 7(a)(1) of the ESA (16 U.S.C. §1536), which authorizes Reclamation to use its authorities to carry out programs for the conservation of endangered and threatened species.

B. Reclamation has authority in accordance with applicable federal law, including the ESA, to undertake a voluntary species conservation program for federally listed species in the Conservation Area.

C. IID, CVWD and the Metropolitan Water District ("MWD"), have negotiated a Quantification Settlement Agreement (QSA) that includes implementation of projects for the conservation of water that is presently used for agricultural purposes within IID and the transfer of the conserved water to CVWD, SDCWA, and MWD. IID, CVWD, SDCWA, and MWD have identified potential impacts that the QSA projects may have on endangered and threatened species in the Conservation Area. These potential impacts have been identified in the Biological Assessment prepared by Reclamation (July 2002) as revised through subsequent memoranda in October and December 2002 ("BA"), and submitted to the U.S. Fish and Wildlife Service

("Service"). After consultation between Reclamation and the Service, the Service issued a Biological Opinion dated December 18, 2002 ("BO").

D. IID has commenced the development of a habitat conservation plan ("HCP") in accordance with Section 10 of the ESA (16 U.S.C. §1539), the California Endangered Species Act ("CESA") and the California Natural Community Conservation Planning Act related to its activities, including the implementation of projects for the conservation of water identified in the QSA and activities related to and in furtherance of the QSA. The HCP is not expected to be completed for up to three years after the execution of the QSA, and IID, CVWD, and SDCWA desire to participate with Reclamation in the implementation of the Species Conservation Program for the purpose of obtaining incidental take authorizations pending completion of the HCP.

E. Reclamation has previously consulted with the Service regarding the effect on endangered and threatened species resulting from its federal actions (the changes in points of diversion from the Colorado River) related to the transfer of water through projects identified in the QSA, and the Service issued its Biological Opinion in January 2001. With the participation of IID, CVWD and SDCWA, Reclamation has developed this Species Conservation Program to meet the statutory and regulatory requirements for the issuance of incidental take authorization for the impacts to the Listed Species in the Conservation Area that may result from activities of IID, CVWD, and SDCWA relating to implementation of water conservation projects identified in the QSA, in accordance with the BA and the BO.

F. The QSA is subject to the implementation of a mechanism to resolve and allocate environmental mitigation responsibility between the Parties on the terms and conditions set forth in that certain Environmental Cost Sharing Agreement ("ECSA") among CVWD, IID, and SDCWA, attached hereto for informational purposes as Exhibit A. CVWD, IID, SDCWA and the State of California have also entered into that certain Quantification Settlement Agreement Joint Powers Agreement ("QSA JPA"), attached hereto for informational purposes as Exhibit B. Among other purposes, the QSA JPA (1) establishes a joint powers authority to fund the environmental mitigation requirements attributable to the QSA and related water transfers, (2) allocates among the State, CVWD, IID and SDCWA costs of environmental mitigation requirements; and (3) makes certain and limits the financial liability of CVWD, IID and SDCWA for environmental mitigation requirements.

G. CVWD, SDCWA and IID have agreed to substantial commitments of water, money and other valuable resources to implement the QSA, including but not limited to, this Agreement and other commitments of funds to mitigate environmental impacts of the QSA, the related water transfers and other related activities. CVWD, SDCWA and IID, individually and collectively, would not have made these commitments but for the commitments of the State in the QSA JPA.

H. This Conservation Agreement is entered into for the purpose of establishing the rights and obligations of the parties to implement the provisions of the Species Conservation Program.

WHEREFORE, in consideration of the recitals set forth above, the issuance and acceptance of incidental take authorizations pursuant to the Species Conservation Program, and the mutual promises set forth herein, the parties to this Conservation Agreement agree as follows:

AGREEMENT

Article 1 ESA Consultation

1.1 In accordance with the BA, Reclamation has consulted with the Service in accordance with Section 7(a)(2) of the ESA regarding the implementation of the Species Conservation Program. Reclamation prepared and submitted to the Service the BA described in Recital C, which identifies and analyzes the potential effects on endangered and threatened species in the Conservation Area resulting from projects for conservation of water identified in the QSA. The Service has issued the BO dated December 18, 2002 that includes a statement of the incidental take of threatened and endangered species that may result from the water conservation projects identified in the QSA within the Conservation Area. A copy of the BO is attached hereto as Exhibit C. The Service consulted with the California Department of Fish and Game ("CDFG") in connection with the measures required under the BO, in order to facilitate issuance of state permits pursuant to CESA.

1.2 Prior to any re-initiation of consultation regarding the Species Conservation Program or the projects for conservation of water identified in the QSA, Reclamation shall provide written notice to the other parties of the basis for re-initiation of consultation. The parties shall meet and confer to determine whether there are reasonable measures that may be taken to obviate the need to re-initiate consultation. In the event that there is a re-initiation of consultation with respect to the Species Conservation Program, Reclamation shall coordinate with the other parties in preparation of any biological assessment.

Article 2 Species Conservation Measures, Reasonable and Prudent Measures, and Terms and Conditions

2.1 The parties to this Conservation Agreement shall implement, or cause to be implemented: (1) the Species Conservation Program (which comprises the conservation measures set forth on pages 8 through 15 of the BO) (2) the reasonable and prudent measures (RPMs) set forth in the BO, and (3) the terms and conditions specified in the Incidental Take Statement ("ITS Terms and Conditions") portion of the BO.

Desert Pupfish

2.2 Each of the parties to this Conservation Agreement shall comply with the ITS RPMs and Terms and Conditions identified to minimize impacts to desert pupfish from the Species Conservation Program and the water conservation projects identified in the QSA.

2.3 Connectivity Impacts—Drains. IID and CVWD shall each be responsible for implementation of the provisions of Pupfish Conservation Measure 1 and the ITS Terms and Conditions Nos. 1.1, 3.1, 3.2, and 3.5 relating to maintenance of their respective drains connecting to the Salton Sea.

2.4 Connectivity Impacts-Refugium. The provisions of Pupfish Conservation Measure 1 and Terms and Conditions relating to creation of one pupfish refugium pond consistent with the Desert Pupfish Recovery Plan, as described in the BO, shall be implemented as follows:

Reclamation shall construct one refugium pond consistent with the Desert Pupfish Recovery Plan. Reclamation will coordinate with the other parties to this Conservation Agreement, the Service, and CDFG to determine the location, timing, and technique in implementing this measure. Reclamation shall bear the cost of siting and constructing the refugium pond and amounts expended by Reclamation shall be non-reimbursable for purposes of the Act of June 17, 1902 (43 U.S.C. §391 *et seq.*) and Acts amendatory thereof and supplemental thereto, and shall not be considered to be a supplemental or additional benefit for purposes of the Reclamation Reform Act of 1982 (43 U.S.C. §390aaa *et seq.*).

The party in whose service area the refugium pond is located (or IID if the refugium is located outside the service areas of the parties) shall manage and maintain the pond in accordance with Pupfish Conservation Measure 1 and shall be responsible for the implementation of the ITS Terms and Conditions Nos. 3.3 and 3.4 for the purpose of assisting in the recovery efforts for desert pupfish. It is not anticipated that these actions will entail construction of a new or replacement refugium pond or other actions that may interfere with normal agricultural operations.

2.5 Selenium Impacts. IID and CVWD shall be responsible for implementation of the provisions of Pupfish Conservation Measure 2 and the ITS Terms and Conditions Nos. 2.1 and 3.5 relating to impacts of selenium on desert pupfish.

2.6 Management and Monitoring. IID and CVWD shall be responsible for implementation of the provisions of Pupfish Conservation Measure 3 and the ITS Terms and Conditions Nos. 2.1, 4.1, 4.2, 4.3, and 4.8 relating to management and monitoring of desert pupfish.

Yuma Clapper Rail and California Black Rail

2.7 Each of the parties to this Conservation Agreement shall comply with the ITS RPMs and Terms and Conditions to minimize impacts to the Yuma clapper rail and California black rail from the Species Conservation Program and water conservation projects identified in the QSA.

2.8 Salinity Impacts. IID shall be responsible for implementation of the provisions of Rail Conservation Measure 1 and Terms and Conditions Nos. 2.2, 3.5, and 3.6 relating to the offset of potential salinity impacts to Yuma clapper rail and California black rail from the Species Conservation Program and water conservation projects identified in the QSA.

2.9 Selenium Impacts. IID shall be responsible for implementation of the provisions of Rail Conservation Measure 2 and the ITS Terms and Conditions 2.2, 3.5, and 3.6 relating to the offset of potential selenium impacts to Yuma clapper rail and California black rail.

2.10 Management and Monitoring. IID shall be responsible for implementation of the provisions of Rail Conservation Measure 3 and the ITS Terms and Conditions Nos. 4.4, 4.5, 4.6, 4.7, and 4.8 relating to management and monitoring of Yuma clapper rail and California black rail. IID, the other parties to the Conservation Agreement, the Service, and CDFG will annually review results of rail surveys and assess the effectiveness of the created marsh in providing habitat for clapper rails. In evaluating the effectiveness of the marsh in providing habitat for clapper rails, IID, the other parties to the Conservation Agreement, the Service, and CDFG will consider the use of the State and Federal refuges by clapper rails as compared to the created marsh. By considering and comparing use (occurrence, abundance, and life history functions) of the created marsh and at State and Federal refuges (if available), it will be possible to assess whether the created marsh is providing for the species, while at the same time taking into account stochastic factors not attributable to management. Management will be adjusted as necessary based on the results of the annual surveys.

Southwestern Willow Flycatcher

2.11 Evaluation of Habitat. Reclamation shall be responsible for implementation of Willow Flycatcher Conservation Measure 1 relating to the identification of suitable southwestern willow flycatcher breeding habitat, as follows:

Reclamation shall evaluate all cottonwood-willow and tamarisk stands that may potentially be affected by the QSA water conservation projects for southwestern willow flycatcher breeding habitat suitability. Using the Anderson and Ohmart classification system (1994), each Saltcedar III and IV and each Cottonwood-willow I, II, III, and IV stand will be evaluated for suitability based on density, structure, and presence of standing water or saturated soils during the breeding season. Suitable breeding habitat will be identified based on characterizations provided in the draft Southwestern Willow Flycatcher Recovery Plan.

Reclamation will perform these evaluations prior to any IID water conservation activities which could impact tamarisk habitat. Upon completion of this initial evaluation, a specific protocol for the habitat monitoring (identified below as voluntary Willow Flycatcher Conservation Measure 2) will be developed in consultation with the other parties to the Conservation Agreement, the Service, and CDFG. This protocol will address the timing and duration of monitoring activities and other details as required.

Reclamation shall bear the cost of performing these evaluations and amounts expended by Reclamation shall be non-reimbursable for purposes of the Act of June 17, 1902 (43 U.S.C. §391 *et seq.*) and Acts amendatory thereof and supplemental thereto, and shall not be considered to be a supplemental or additional benefit for purposes of the Reclamation Reform Act of 1982 (43 U.S.C. §390aaa *et seq.*). Each party shall bear its own cost for participating in the reviews and discussions with the Service and CDFG regarding development of the protocol for habitat monitoring.

2.12 Suitable Habitat Monitoring and Management. Each party whose service area includes suitable southwestern willow flycatcher breeding habitat, as identified by Reclamation pursuant to Willow Flycatcher Conservation Measure 1, shall be responsible for implementation of the provisions of Willow Flycatcher Conservation Measure 2 relating to monitoring the habitat and quantifying changes in quantity and quality of the habitat within their service area and Willow Flycatcher Conservation Measure 3 relating to the management and monitoring of replacement habitat for southwestern willow flycatcher within their service area.

2.13 Take Minimization During Construction. IID shall be responsible for implementation of the provisions of Willow Flycatcher Conservation Measure 4 relating to the avoidance of construction impacts to southwestern willow flycatcher along the East Highline Canal and lateral interceptors.

California Brown Pelican

2.14 Roost Site Creation. IID, in cooperation with SDCWA and CVWD, shall be responsible for implementation of Brown Pelican Conservation Measure 1 and ITS Terms and Conditions Nos. 3.5 and 3.7 relating to the creation of coastal roost sites for California brown pelicans. The California Department of Fish and Game has indicated that it may assume responsibility for implementation of Brown Pelican Conservation Measure 1 and ITS Terms and Conditions Nos. 3.5 and 3.7 relating to the creation of coastal roost sites for California brown pelicans. If the California Department of Fish and Game fails to assume that responsibility, IID, in cooperation with SDCWA and CVWD, shall remain responsible for those measures. IID, in cooperation with the other parties to the Conservation Agreement, shall be responsible for the implementation of Terms and Conditions Nos. 1.2, 3.5, and 3.7 relating to the creation of roost structures in and around the Salton Sea.

Article 3 General Provisions

3.1 IID, SDCWA, and CVWD acknowledge that they are each required to provide funds to pay certain mitigation costs pursuant to the ECSA and the QSA JPA, including their respective costs incurred pursuant to this Conservation Agreement. Notwithstanding any provision of this Agreement, the Species Conservation Program or the BO, IID, SDCWA, and CVWD, individually and collectively, shall not be required to pay, or contribute to the payment of, or incur any costs or expenses related to the implementation of this Agreement, except to the extent and as provided in the ECSA and the QSA JPA. Without limiting the generality of the foregoing, IID, SDCWA, and CVWD are not required to pay or incur any costs or expenses attributable to the implementation of this Agreement in an amount that would exceed the limitations attributable to such agencies, individually and collectively, in the ECSA and the QSA JPA. IID, as the CEQA Lead Agency for the IID Water Conservation and Transfer Project, shall have the right to rely upon the commitments of the parties set forth in the Conservation Agreement, the ECSA and the QSA JPA to perform and/or fund the Species Conservation Program.

3.2 The party with responsibility for implementation of each conservation measure adopted in the BO and each ITS Term and Condition shall perform its obligations in a timely manner and with the frequency required.

3.3 Notwithstanding the allocation of responsibility for implementation, each party may participate, at its own cost, in any discussions with the Service and CDFG regarding each conservation measure or ITS Term and Condition. To ensure the opportunity for such participation, each party shall give reasonable notice to the other parties of any planned or scheduled discussions with the Service and CDFG regarding each matter governed by this Conservation Agreement.

3.4 Each party that is required to prepare any report, plan or other document to implement any conservation measure or ITS Term and Condition shall provide a copy of each report, plan or other document to the other parties within a reasonable time after its preparation.

3.5 Reimbursement of all costs and expenses incurred by IID, CVWD, or SDCWA shall be made in accordance with the provisions of the ECSA and the QSA JPA.

3.6 Upon the completion of an HCP, if any, that provides incidental take authority for the same water conservation projects identified in the QSA that are covered by the BO, the parties shall meet and confer in good faith to identify duplicative conservation measures and ITS Terms and Conditions that are required by both the BA/BO and the HCP. By written agreement executed by all of the parties to this Conservation Agreement, the rights and obligations for implementation and funding of each identified duplicative conservation measure, or Term and Condition may be re-assigned to avoid duplication, consistent with the parties' obligations under the ECSA and the QSA JPA.

3.7 Any notice that is authorized or required to be given pursuant to this Conservation Agreement shall be delivered by first class mail, postage prepaid, as follows:

Reclamation	Area Manager, Boulder Canyon Operations Office Attn: Ms. Jayne Harkins U.S. Bureau of Reclamation P.O. Box 61470 Boulder City, Nevada 89006-14
IID	Imperial Irrigation District Attn: Tina Shields P. O. Box 937 Imperial, CA 92251
CVWD	Coachella Valley Water District Attn: Steve Robbins P. O. Box 1058 Coachella, CA 92236

SDCWA

San Diego County Water Authority
Attn: Larry Purcell
4677 Overland Avenue
San Diego, CA 92123

Any party may change the address to which notices are to be sent by giving written notice of such change to the other parties in accordance with this paragraph.

3.8 Nothing in this Conservation Agreement shall affect the rights and obligations of the parties under other agreements governing the implementation of conservation measures for impacts to endangered and threatened species on the Colorado River resulting from water transfer projects identified in the QSA.

Article 4 Commencement and Termination

4.1 This Conservation Agreement shall become effective only upon the execution by all parties of this Conservation Agreement, and execution by the United States District Court for the Southern District of California of the Stipulation and Order dismissing the case IID v. United States et al., Case No. 03-CV-0069W(JFS).

4.2 The obligations of each party under this Conservation Agreement to implement or finance the conservation measures and ITS RPMs and Terms and Conditions, shall be effective only to the extent that the BO issued by the Service remains in effect and includes a statement of the incidental take, if any, that will result from the action. The statement of the incidental take shall include any incidental take of Listed Species that is likely to result from the water conservation projects identified in the QSA.

4.3 In the event that any party fails to timely or properly implement the BO's conservation measures and ITS Terms and Conditions for which the party is responsible, any other party may, after giving reasonable notice and opportunity to perform, undertake to implement those measures. In the event that IID, CVWD, and SDCWA fail to perform an obligation of any of them after written notice to each from Reclamation and a reasonable time for them to perform, Reclamation shall have no further responsibility to perform its obligations under this Conservation Agreement.

4.4 This Conservation Agreement shall automatically terminate in the event of a termination of the Colorado River Water Delivery Agreement pursuant to paragraphs 6(b) and (c) therein.

4.5 In the event of a termination pursuant to this Article, each party shall remain liable to meet any obligations that were incurred pursuant to this Conservation Agreement prior to the effective date of the termination consistent with the parties' obligation under the ECSA and the QSA JPA.

IN WITNESS WHEREOF, the parties have executed this Conservation Agreement as of the date first written above.

Reclamation United States Department of the Interior, Bureau of Reclamation

By Robert W. Johnson
Name
Title

IID Imperial Irrigation District

By [Signature]
Name
Title *Chief Counsel*

CVWD Coachella Valley Water District

By [Signature]
Name
Title *GENERAL MANAGER*

SDCWA San Diego County Water Authority

By [Signature]
Name
Title *General Manager*

CONSERVATION AGREEMENT

AMONG

**THE BUREAU OF RECLAMATION,
IMPERIAL IRRIGATION DISTRICT,
COACHELLA VALLEY WATER DISTRICT, and
SAN DIEGO COUNTY WATER AUTHORITY**

EXHIBIT A

**ENVIRONMENTAL COST SHARING, FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

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**ENVIRONMENTAL COST SHARING , FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

This Environmental Cost Sharing, Funding, and Habitat Conservation Plan Development Agreement ("Agreement") is entered into as of October 10, 2003 ("Agreement Date"), by and among the COACHELLA VALLEY WATER DISTRICT, a California county water district ("CVWD"); the IMPERIAL IRRIGATION DISTRICT, a California irrigation district ("IID"); and the SAN DIEGO COUNTY WATER AUTHORITY, a California county water authority ("SDCWA") (CVWD, IID, and SDCWA are sometimes referred to individually in this Agreement as "Party" and collectively as the "Parties").

RECITALS:

- A. IID, MWD and CVWD have entered into the Quantification Settlement Agreement dated as of October 10, 2003 (the "QSA").
- B. IID and SDCWA have executed an Agreement for Transfer of Conserved Water dated April 29, 1998, and various amendments thereto (collectively, the "1998 IID/SDCWA Transfer Agreement") subject to environmental review and other conditions, which describes certain proposed activities involving the conservation of water by IID and the transfer of the conserved water to SDCWA.
- C. IID and SDCWA have entered into an agreement dated January 27, 2000 to share certain costs related to the environmental review and compliance process and other state and federal approvals required to satisfy conditions necessary to implement the transactions described in the 1998 IID/SDCWA Transfer Agreement on the terms set forth therein (as the same may be amended from time to time, the "IID/SDCWA Cost Sharing Protocol).
- D. The State of California has enacted the QSA Legislation as defined in the QSA.
- E. The Parties and the State of California have executed the QSA-JPA as defined in the QSA, which provides, among other things, that Environmental Mitigation Costs for the IID water budget and certain IID transfers pursuant to the QSA and Related Agreements in excess of one hundred thirty-three million dollars (\$133,000,000) in Effective-Date Dollars shall be the exclusive responsibility of the State of California so as to ensure compliance with all federal and state environmental laws, including but not limited to the federal Endangered Species Act, federal Clean Air Act, and federal Clean Water Act.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises set forth herein, the Parties hereby agree as follows:

**ARTICLE 1
DEFINITIONS**

1.1. Incorporated Definitions. The terms with initial capital letters that are used in this Agreement shall have the same meaning as set forth in Section 1.1 of the QSA, as of the Closing Date of the QSA, unless the context otherwise requires.

1.2. Additional Definitions. The following terms with initial capital letters shall have the meaning as set forth below.

(1) **Changed Circumstances.** Changes in circumstances affecting a species or the geographic area covered by the HCP that can reasonably be anticipated by the parties and that can reasonably be planned for in the HCP (e.g. a fire or other natural catastrophic event in areas prone to such event.) Changed Circumstances and the planned responses to those circumstances are described in the Draft HCP.

(2) **Class A Covered Species.** The species identified in Table 1.5-1 of the Draft HCP, but excluding the 25 species identified in Table 3.9-1 of the Draft HCP.

(3) **Class B Covered Species.** The species identified in Table 3.9-1 of the Draft HCP.

(4) **Costs.** All out of pocket costs reasonably incurred by a Party for a specified purpose pursuant to this Agreement, including, but not limited to, financing costs, costs of the Parties' staff, contractors, equipment, and real and personal property. The cost of real property shall be determined by its fair market value as defined in California Code of Civil Procedure §§ 1263.310 *et seq.*

(5) **Covered Activities.** Those activities described as Covered Activities in the Draft HCP.

(6) **Covered Species.** Class A Covered Species and Class B Covered Species.

(7) **Decision Date.** October 10, 2003.

(8) **Draft HCP.** The draft Habitat Conservation Plan dated June 2002 and included in the Final EIR/EIS for the IID Water Conservation and Transfer Project, as certified by the IID Board on June 28, 2002.

(9) **Environmental Litigation Costs.** All Costs reasonably incurred by any Party to defend any litigation involving transactions contemplated by the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement that challenges in whole or in part compliance with applicable environmental laws and regulations or any permit, appraisal, authorization, opinion, assessment or agreement pursuant to any other federal or any state resource protection law or applicable federal or state regulation implementing same.

(10) **Environmental Mitigation Costs.** All Costs reasonably incurred by any Party to satisfy the Environmental Mitigation Requirements. Reasonable attorneys' fees incurred for legal services related to the financing of environmental mitigation expenses shall be included as Mitigation Costs, but no other attorneys' fees incurred by any Party shall be included.

(11) **Environmental Mitigation Requirements.** Any measure required as a result of any Environmental Review Process for activities which are part of or in furtherance of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement or the

Project described in the Final EIR/EIS for the IID Water Conservation and Transfer Project, certified by IID on June 28, 2002, as modified and supplemented by the Addendum thereto dated September 2003, but still including the Draft HCP, the HCP Mitigation Requirements, the transfer of up to 145 KAF in the aggregate as an Interim Surplus Backfill as referenced in the IID/DWR Transfer Agreement, and including the arrangement for ensuring adequate funding to pay for all required measures, but excluding activities and Costs incurred to address:

- (i) Environmental impacts within the CVWD, and SDCWA service areas other than impacts related to the Salton Sea within the CVWD service area;
- (ii) Environmental impacts associated with the All-American Canal and the Coachella Canal lining projects;
- (iii) Environmental impacts associated with the Lower Colorado River, other than impacts that are attributable to the transfer of Conserved Water from IID to SDCWA pursuant to the 1998 IID/SDCWA Transfer Agreement; and
- (iv) Any socioeconomic impacts.

(12) **Environmental Review Costs.** All Costs, including attorneys' fees, reasonably incurred by any Party in connection with any Environmental Review Process. Environmental Review Costs incurred prior to the Agreement Date shall be governed by Section 3.1 and shall not be included in Environmental Mitigation Costs.

(13) **Environmental Review Process.** Any process:

- (i) To conduct environmental review and/or assessment required under CEQA, NEPA and applicable federal, state and agency regulations implementing those statutes;
- (ii) To obtain any permit, approval, authorization, opinion, assessment or agreement pursuant to the Endangered Species Act ("ESA"), the California Endangered Species Act ("CESA"), the Natural Community Conservation Planning Act ("NCCPA"), the state and federal air quality laws, the California Water Code, the public trust doctrine, or any other federal or state environmental resource protection law or applicable federal or state regulations implementing same; and/or
- (iii) To study and/or design any mitigation required to comply with CEQA, NEPA, ESA, CESA, NCCPA, the state and federal air quality laws, the California Water Code, or any other federal or state resource protection law or applicable federal or state regulations implementing same;
- (iv) But not the Lower Colorado River Multi-Species Conservation Program among the States of California, Arizona and Nevada.

(14) **Expected Environmental Mitigation Costs.** The estimated present value costs of satisfying the Environmental Mitigation Requirements, which are stated and described in Exhibit A, attached hereto.

(15) **Expected HCP Mitigation Costs.** That portion of the Expected Environmental Mitigation Costs attributable to the HCP Mitigation Requirements, such Costs being described in Exhibit A.

(16) **HCP Mitigation Requirements.** All Environmental Mitigation Requirements described in Exhibit B attached hereto, and any modified or additional mitigation requirements that may be created pursuant to the HCP described in Section 5 herein. HCP Mitigation Requirements include, but are not limited to, actions to avoid, reduce, minimize, mitigate, or compensate for impacts on Covered Species and their habitat, and also actions to enhance the survival or recovery of the Covered Species.

(17) **Parties' Funds.** Funds required to be provided by the Parties to the QSA-JPA for Environmental Mitigation Requirements in the amounts set forth on Exhibit E.

(18) **Permits.** Collectively, incidental take permits issued by the U.S. Fish and Wildlife Service pursuant to 16 U.S.C. Section 1539(a)(1)(B) and by the California Department of Fish and Game pursuant to Fish and Game Code Sections 2081 and 2835.

(19) **Permit Effective Date.** The date the Permits take effect under applicable laws and regulations.

(20) **Remaining Environmental Mitigation Costs.** Environmental Mitigation Costs in excess of such Costs paid by the Parties' Funds.

(21) **Resource Approval Requirements.** The respective actions and responsibilities of the Parties, as lead agency or otherwise, undertaken in connection with the Resource Approvals contemplated by Section 6.2(2)(ii) of the QSA.

(22) **Review Requirements.** The Environmental Review and assessments undertaken by the respective Parties, as lead agency or otherwise.

(23) **State Obligation.** The amount, if any, of the Environmental Mitigation Costs required to be paid by the State of California pursuant to the QSA-JPA. The Parties understand the State Obligation to be an unconditional contractual obligation of the State of California not dependent on any further State action, and are relying on the State Obligation in order to comply with the extensive state and federal requirements that mandate Environmental Mitigation Requirements. In addition, the Parties are relying on the State Obligation in making contracts with third parties, including without limitation, landowners and farmers in the Imperial Valley who will be entering contracts to produce conserved water.

(24) **State Loan Guarantee.** A binding commitment by the California Infrastructure & Economic Development Bank to unconditionally guarantee the repayment in full of any outstanding debt incurred by the IID to fund capital improvements for the creation of Conserved Water provided for under the QSA and its Related Agreements, in an amount not to exceed One Hundred Fifty Million Dollars (\$150,000,000) in 2003 dollars, in the event that the QSA term ends prior to Year 45 of the QSA or, in lieu of an unconditional guarantee, a reasonable economic equivalent. Such guarantee shall be without any rights of recourse, subrogation, reimbursement, contribution or indemnity against the IID.

(25) **Unexpected Environmental Mitigation Costs.** Any Costs required for satisfaction of Environmental Mitigation Requirements that exceed Expected Environmental Mitigation Costs.

(26) **Unexpected HCP Mitigation Costs.** Any Costs required for satisfaction of HCP Mitigation Requirements that exceed Expected HCP Mitigation Costs.

(27) **Unforeseen Circumstances.** Changes in circumstances affecting a species or geographic area covered by the HCP that could not reasonably have been anticipated by IID at the time of the preparation of the Draft HCP.

(28) **Wildlife Agencies.** Collectively, the U.S. Fish and Wildlife Service ("USFWS") and the California Department of Fish and Game ("CDFG").

1.3. Rules of Construction and Word Usage. Unless the context clearly requires otherwise:

(1) The Recitals to this Agreement are a part of this Agreement to the same extent as the Articles;

(2) The Exhibits attached to this Agreement are incorporated by reference and are to be considered part of the terms of this Agreement;

(3) The plural and singular numbers include the other;

(4) The masculine, feminine, and neuter genders include the others;

(5) "Shall," "will," "must," and "agrees" are each mandatory;

(6) "May" is permissive;

(7) "May not" is prohibitory;

(8) "Or" is not exclusive;

(9) "Includes" and "including" are not limiting;

(10) "Between" includes the ends of the identified range; and

(11) "Person" includes any natural person or legal entity.

ARTICLE 2 ENVIRONMENTAL MITIGATION MANAGEMENT

2.1. Ongoing Review Requirements. The Parties will cooperate and consult with one another with a view to assuring the timely and proper completion of all environmental reviews and assessments.

2.2. Ongoing Resource Approval Requirements.

(1) **Primary Responsibility.** After the Agreement Date, each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to any resource approval shall obtain the prior consent of the other Parties (which consent may not be unreasonably withheld) before entering into a binding agreement with any person, including a Party, which contains terms and conditions pertaining to such approval requiring the incurrence of significant Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely acquisition of all resource approvals.

2.3. Mitigation Implementation Measures.

(1) **Primary Responsibility.** Each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to the acquisition, construction or carrying out of Environmental Mitigation Requirements that will result in Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement shall exercise due care and prudence in the making of any decision and the performance of any activity relating to such measures.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely and proper implementation of all Environmental Mitigation Requirements described in Section 2.3(1) at a reasonable cost consistent with the Parties' interests in minimizing their respective obligations under this Agreement and the public interest.

ARTICLE 3 ENVIRONMENTAL REVIEW AND LITIGATION COSTS

3.1. Environmental Review Costs. Within thirty (30) days after the Agreement Date, CVWD shall pay IID Two Hundred Thousand Dollars (\$200,000). Except for the foregoing, and except as otherwise provided for in this Agreement or as a Party and one or more of the other Parties may otherwise agree under the IID/SDCWA Cost Sharing Protocol or under any other cost sharing protocol or similar written arrangement, each Party shall bear its own Environmental Review Costs incurred prior to or after the Effective Date.

3.2. Environmental Litigation Costs. It is contemplated that the Parties will join in the defense of any environmental litigation pertaining to the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. Each Party shall bear its own Environmental Litigation Costs incurred in connection with any such defense, except as such Party may otherwise agree pursuant to a joint defense agreement between or among one or more of the other Parties pertaining to any such defense and specifying the respective responsibilities of the parties to such agreement, including any cost-sharing with respect thereto.

3.3. Federal Agency Reimbursement Claims. If BOR, the USFWS, or any other federal agency request the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

3.4. California Agency Reimbursement Claims. If the CDFG, or any other California State agency, requests the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements, or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

ARTICLE 4 ENVIRONMENTAL MITIGATION COSTS

4.1. Allocation of Environmental Mitigation Costs.

(1) **In General.** Environmental Mitigation Costs shall be paid to the QSA-JPA from the Parties' Funds in the amounts set forth in Exhibit D and on the schedules attached as exhibits to the QSA-JPA.

(2) **IID Contribution.** IID's total payments of Environmental Mitigation Costs shall not exceed Thirty Million Dollars (\$30,000,000), as described in the 1998 IID/SDCWA Transfer Agreement, as amended as of the Closing Date of the QSA, and paid on the schedule attached to the QSA-JPA. IID shall also pay to the QSA-JPA the Settlement and Efficiency Opportunity Payment as required pursuant to the 1998 IID/SDCWA Transfer Agreement and IID/CVWD Acquisition Agreement on the schedule attached to the QSA-JPA.

(3) **Conditions Precedent.** As of the Closing Date, a binding commitment for the State Loan Guarantee in a form acceptable to the IID, and a binding commitment for the State Obligations in a form acceptable to the Parties shall have been obtained.

4.2. Payment of Unexpected and Remaining Environmental Mitigation Costs.

(1) **Unexpected Environmental Mitigation Costs.** Unexpected Environmental Mitigation Costs shall first be paid from any available Parties' Funds, and then from the State Obligation.

(2) **Remaining Environmental Mitigation Costs.** In the event that the State determines that the costs of Remaining Environmental Mitigation Costs during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement under this Section 4.2(2) would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by the Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected, Unexpected or Remaining Unexpected Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

4.3. Payment and Reimbursement of Environmental Mitigation Costs, as Incurred.

(1) **In General.** Each Party will maintain proper accounting records detailing the Environmental Mitigation Costs paid by it to the QSA-JPA. Except as may otherwise be agreed by the Parties, indirect costs shall not be counted as incurred costs. For purposes of this Agreement, “indirect costs” include, but are not limited to, overhead costs, losses of revenue from any source and other opportunity costs of any kind.

(2) **Quantification of Incurred Costs.** Each Party will provide to the other Parties within 30 days after the end of each calendar quarter a detailed report setting forth the Environmental Mitigation Costs paid by it during such quarter. The form of such report will be as agreed from time to time by the Parties. Each such report will be subject to audit and verification by any Party, at that Party’s expense.

(3) **Costs In the Event of Termination.** If the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement are terminated, the obligation of the Parties’ Funds and of the State to pay for Environmental Mitigation Costs and Remaining Environmental Mitigation Costs attributable to the impacts caused by the Conserved Water transferred or acquired during the term of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement shall continue as long as Environmental Mitigation is necessary to mitigate any continuing impacts that last beyond termination.

(4) In the event that the State determines that the costs of Remaining Environmental Mitigation Costs after termination of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement under this Section 4.3(4) would be reduced if modification were made to IID’s operations or to the operations of a farmer within IID’s service area, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Remaining Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of

different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

In the event that the State determines that the costs referred to in the preceding paragraph could be reduced through modification of the operations of a farmer within the IID service area, the State shall notify IID of the estimated amount of such reduction in costs and shall request that IID request that the farmer take such action and/or modify operations so as to reduce said costs. IID shall thereupon determine whether the requested modification meets the requirements of subparagraphs (i) through (vi) of the preceding paragraph and if it does, shall request that the farmer undertake such modifications. If the farmer fails to undertake such modifications, the State shall not be obligated to pay any such costs to the extent that the requirement for such mitigation could be avoided or reduced by the requested changes.

ARTICLE 5 HABITAT CONSERVATION PLAN

5.1. Approval of HCP. Commencing with the Agreement Date, SDCWA and CVWD, in consultation and collaboration with IID, shall use their best efforts to cause the USFWS and the CDFG to approve, prior to December 31, 2006, a habitat conservation plan/natural community conservation plan ("HCP") and related Permits which satisfy all of the standards and criteria described in Section 5.2. The obligation to utilize such best efforts shall continue except to the extent that coverage of a species is deemed infeasible pursuant to Section 5.4 below. "Best efforts" means the prudent, diligent and good-faith efforts of SDCWA and CVWD to secure the HCP and related Permits as a fiduciary for the benefit of IID, but shall not require the expenditure by SDCWA and CVWD together of more than Five Million Dollars (\$5,000,000) in 2002 dollars to fund third-party consultants tasked with developing the HCP. CVWD shall not be required to commit its staff and in-house resources in excess of two qualified employee equivalents.

5.2. HCP Standards and Criteria. The HCP and the Permits shall:

- (1) Comply with all applicable requirements of the ESA, CESA and Natural Community Conservation Planning Act;
- (2) Provide IID with the authority to implement the Covered Activities in compliance with ESA and CESA;
- (3) Provide IID with the authority to take the Covered Species incidental to the Covered Activities pursuant to ESA and CESA. Such take authority shall become effective no later than (i) the Permit Effective Date with regard to any Covered Species that is listed as an endangered species or threatened species under ESA as of the Permit Effective Date, (ii) the Permit Effective Date with regard to any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA as of the Permit Effective Date, (iii) immediately upon the listing (and without further action or approval by USFWS) of any other

Covered Species as a threatened species or endangered species pursuant to ESA after the Permit Effective Date, and (iv) immediately upon the listing (and without any further approval action or approval by CDFG) of any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA after the Permit Effective Date;

(4) Have a term of years not less than forty-five (45) years from the Permit Effective Date, except that coverage for the white pelican, black skimmer, and double-crested cormorant may be limited to a term of fifteen (15) years from the Permit Effective Date;

(5) Not impose on IID, or otherwise require IID to fund, support or implement, any Environmental Mitigation Requirements other than the HCP Mitigation Requirements described on Exhibit A. In no event shall IID be obligated to pay for any Costs of complying with or implementing the HCP or complying with the Permits, in excess of Section 4.1(2) or other limitation on IID's obligation to pay for mitigation costs.

(6) Include an Implementation Agreement among IID and the Wildlife Agencies that describes the rights and obligations of IID and the Wildlife Agencies with regard to the implementation of the HCP. The Implementation Agreement shall, at a minimum, include the following covenants in a form that is valid, binding and enforceable by IID:

(i) In the event of Unforeseen Circumstances, USFWS and CDFG will not require from IID the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources with regard to the impacts of the Covered Activities on the Covered Species;

(ii) Except for the HCP Mitigation Requirements described on Exhibit A, no limitations or restrictions shall be imposed on IID, either directly or indirectly, by USFWS or CDFG with regard to the impacts of the Covered Activities on the Covered Species or with regard to the impacts on the Covered Species attributable to Changed Circumstances;

(iii) USFWS shall agree that the Section 10(a) Permit shall constitute a Special Purpose Permit under 50 CFR section 21.27, for the take of all Covered Species identified at 50 CFR section 10.13, excluding bald eagles which are listed under ESA as of the Effective Date. The Special Purpose Permit shall be valid for a period of three (3) years from its Effective Date, provided the Section 10(a) Permit remains in effect for such period. The Special Purpose Permit shall be renewed, provided the IID remains in compliance with the terms of the Implementation Agreement and the Section 10(a) Permit. Each such renewal shall be valid for a period of three years, provided that the Section 10(a) Permit remains in effect for such period. USFWS will not refer the incidental take of any bald eagle, *Haliaeetus leucocephalus*, for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the Mitigation Requirements;

(iv) In any consultation that may be required or processed pursuant to Section 7 of ESA (16 U.S.C. section 1536(a)) with regard to the Covered Activities

analyzed in the ESA intra-Service Section 7 consultation for the HCP, the USFWS shall, to the maximum extent appropriate and permitted by law, rely upon, and utilize, the ESA biological opinion completed with regard to analysis of the HCP and, if appropriate, programmatic Section 7 opinions governing Covered Species;

(v) In the event that a critical habitat determination is made for any Covered Species, no additional Mitigation shall be required of IID that is in addition to the Mitigation Requirements; and.

(vi) Neither USFWS or CDFG shall suspend or revoke any of the Permits without first conducting a formal adjudicatory hearing substantially in accordance with the procedures applicable to hearings conducted pursuant to Sections 554-556 of the federal Administrative Procedure Act to the extent permitted by applicable law.

(7) Be authorized by complete and final environmental documentation pursuant to CEQA and NEPA.

5.3. Exceptions. Notwithstanding the provisions of Sections 5.1 and 5.2, above, SDCWA and CVWD shall not be required to provide coverage under the HCP for certain Covered Species if such coverage is deemed infeasible. Coverage shall be deemed infeasible under the following circumstances:

(1) As to Class B Covered Species, if, as of June 1, 2005, despite the best efforts of SDCWA and CVWD (i) the Wildlife Agencies determine (by final agency action) that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the Expected HCP Mitigation Costs;

(2) As to Class A Covered Species, SDCWA and CVWD shall have utilized their continuous best efforts until December 31, 2005, to obtain coverage for such species, but (i) the Wildlife Agencies have determined (by final agency action) as of December 31, 2006, that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the total amount of Expected HCP Mitigation Costs described in Exhibit A. In the event that IID is relieved of all obligations under applicable law and regulation to undertake some portion of the HCP Mitigation Requirements described in Exhibit B, the amount of Expected HCP Mitigation Costs for purposes of this Section 5.3 shall be adjusted to reflect any change in said requirements.

5.4. Revival of Efforts. In the event that coverage of a Class A or Class B Covered Species is deemed infeasible as of December 31, 2006, and June 1, 2005, respectively, pursuant to subsection 5.3(i) and (ii) above, and if new information becomes available which indicates

that approval of coverage of that species by the Wildlife Agencies is feasible and within the budget of Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), SDCWA and CVWD shall revive their best efforts to obtain coverage for that species.

5.5. Modifications to IID Operations. In the event that SDCWA and CVWD determine that the cost of satisfying the requirements of subsections 5.1 and 5.2, above, would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by USFWS and CDFG and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected HCP Mitigation Costs;

(v) The modification does not require a change in operations by any individual farmer(s);

(vi) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vii) If the modification involves terminating or reducing the operation of a capital project, then the affected owner/operator (IID or a farmer) has reasonably determined that the termination/reduction will not adversely affect its operations or farming, compared to conditions prior to the termination/reduction of operations.

5.6. Breach of Agreement. Any failure of the IID, SDCWA or CVWD to satisfy its respective obligations described in this Article 5 shall constitute a material breach of this Agreement. The Parties shall utilize the procedures of Sections 7.1 and 7.3 to resolve any dispute regarding the existence of a material breach under this Section.

5.7. Compliance with Laws. IID shall have the right, at any time during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, to cease any activity if IID, acting in good faith and after receiving a written notification or warning, determines that continuation of such activity will: (i) violate ESA, CESA, any regulations or

orders promulgated pursuant thereto, the terms and conditions of any ESA or CESA permit, approval or agreement; or (ii) otherwise violate applicable state, federal or local laws, ordinances or regulations, unless IID is immune from such liability pursuant to statute. Prior to making such determination, if circumstances permit, IID shall consult with the other Parties to this Agreement and with the Wildlife Agencies, and other agency with the authority to enforce the statute, regulation, permit, order or approval that is the subject of the proposed IID determination. IID shall not cease the activity if the agency with jurisdiction to enforce the applicable statute, regulation, permit, order or approval, provides IID with adequate assurances, in writing, that the continuation of the activity will not violate the applicable statute, regulation, permit, order or approval. IID must utilize a substitute activity for the ceased activity, if such substitute is environmentally, physically and economically available. Any additional costs for the substitute activity shall be treated as an Unexpected HCP Mitigation Cost.

ARTICLE 6 CONTRACT ADMINISTRATION

6.1. Contract Managers.

(1) **Designation of Contract Managers.** In order to facilitate and implement this Agreement, the contract manager designated by each Party herein shall be responsible for managing and implementing that Party's performance hereunder. Any Party may change its designated contract manager at any time by prior written notice to the other Parties. The initial contract managers are:

For CVWD: Steve Robbins

For IID: Tina A. Shields

For SDCWA: Larry Purcell

(2) **Communications.** All correspondence, notices or other matters related to this Agreement, including payments, shall be directed to the appropriate contract manager designated above.

(3) **Administrative Protocols.** The contract managers will develop and amend from time to time written administrative protocols, subject in each case to the approval of the Parties or their delegates.

ARTICLE 7 DISPUTES

7.1. Disputes Among or Between the Parties. The Parties or their delegates shall seek to resolve any dispute concerning the interpretation or implementation of this Agreement through negotiation involving, as and when appropriate, the general manager or chief executive officer of each of the Parties. Any unresolved dispute among or between CVWD, IID and/or SDCWA under Articles 4 and 5 of this Agreement shall be resolved pursuant to Section 7.3. Any other unresolved dispute among or between Parties under this Agreement shall be resolved

by litigation pursuant to Section 7.2. The Parties consent to suit in Federal court to enforce the terms of this Agreement.

7.2. Action or Proceeding Between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to being transferred to a "Neutral County," or instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding. Each party therefore:

- (1) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;
- (2) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;
- (3) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and
- (4) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

Nothing in this section, however, impairs or limits the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

7.3. Resolution of Arbitration Disputes. Disputes among or between Parties under Articles 4 and 5 of this Agreement shall be resolved pursuant to the provisions of this Article.

(1) Any dispute which cannot be resolved by consensual agreement shall be resolved through binding arbitration by a panel of arbitrators in an arbitration proceeding conducted in a Neutral County, or such other location as the Parties may agree. Arbitration proceedings may be initiated by any Party sending a demand for arbitration to the other Parties in conformance with the Notice provisions of this Agreement. The Parties shall impanel a group of three (3) arbitrators by each selecting an arbitrator of its choice who shall then select the third (3rd) member of the panel. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. Prior to the commencement of proceedings, the appointed arbitrators will take an oath of impartiality. The Parties shall use their reasonable best efforts to have the arbitration proceeding concluded within ninety (90) Business Days.

(2) In rendering their determination, the arbitrators shall determine the rights and obligations of the Parties according to the substantive and procedural laws of California. All discovery shall be governed by the CCP with all applicable time periods for notice and scheduling provided therein being reduced by one-half (½). The arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding

compliance with discovery requests shall be decided by the arbitrators. A decision by two (2) of three (3) arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

(3) The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party(ies) against whom the decision is rendered. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the costs of the other Party(ies).

ARTICLE 8 GENERAL PROVISIONS

8.1. Term. This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date, except that the requirements of Section 4.3(5) shall survive the Termination Date.

8.2. Amendment. This Agreement may be amended only by a written instrument signed by the IID, SDCWA and CVWD.

8.3. Attorneys' Fees. If any Party commences a legal proceeding for any relief against any other Party to this Agreement arising out of this Agreement, the losing Party shall pay the prevailing Party's legal costs and expenses, including, but not limited to, reasonable attorneys' fees and court costs, except as may otherwise be specified in the decision or order entered in said proceeding.

8.4. Authority. Each Party represents and warrants that: (i) it has the requisite power and authority to enter into and perform its obligations under this Agreement; (ii) the individuals executing this Agreement on its behalf are the duly authorized agents of such Party and are authorized to do so under the Party's governing documents; and (iii) the terms of this Agreement are binding upon and enforceable against such Party in accordance with its terms.

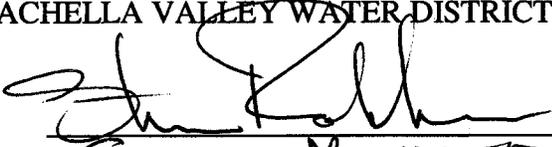
8.5. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of which, taken together, shall constitute one and the same Agreement after each party has signed such a counterpart.

8.6. Effective Date. This Agreement shall be effective on the Effective Date of the QSA.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the Date first written above.

"CVWD"

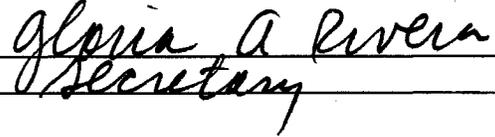
COACHELLA VALLEY WATER DISTRICT

By: 
Title: GENERAL MANAGER

"IID"

IMPERIAL IRRIGATION DISTRICT

By: 
Title: President

By: 
Title: Secretary

"SDCWA"

SAN DIEGO COUNTY WATER AUTHORITY

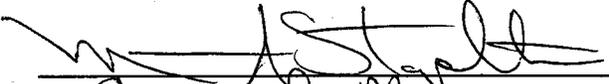
By: 
Title: General Manager

EXHIBIT A

EXHIBIT A

General Notes

1. Except as noted, all costs are in year 2002 dollars. Future costs have been discounted 3% for present value estimates.
2. Costs for each measure include 3 phases: 1) design/permitting, 2) implementation/construction, and 3) operations & maintenance for the 45 year project period.
3. Costs for each measure are dependent on the specific timing and duration for each phase. Phases were initiated when necessary to provide offsets for expected impacts.
4. Stabilization of the receding Salton Sea shoreline utilizes gravel cover. Costs for alternative measures could vary substantially.
5. No costs are included for any unknown future mitigation measures that might arise from required studies.
6. No specific sites for habitat creation measures have been identified. Costs are planning estimates only and may change depending upon location, local economic conditions, final design, etc.
7. No additional commitment of land, water or other resources is required for adaptive management.
8. Attempts have been made to eliminate duplication of costs among measures.
9. Supporting documentation for each cost estimate is available at CVWD, IID, MWD, and SDCWA.

Estimated HCP Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost items.
General - 1	Hire full-time biologist to manage HCP and participate on HCP Implementation Team.	3,678	First year O&M \$150,000. Begins in 2003.
General - 2	Convene and facilitate HCP IT.	270	Reimbursement for CDFG and USFWS participation on HCP IT. IID biologist participation addressed in General-1. Begins in 2003.
Salton Sea - 2	Pupfish refugium pond.	340	Pond creation to be implemented at end of 15 Year Minimization Plan.
Salton Sea - 3	Tamarisk scrub habitat surveys and creation.	11,132	Surveys and habitat replacement to begin at end of 15 Year Minimization Plan. Maximum creation assumes 1321 acres.
Tree Habitat - 1	Tree habitat surveys and creation.	751	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 34.1 acres.

Tree Habitat - 2	Seepage community surveys and creation.	644	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 30 acres.
Tree Habitat - 3	Site surveys for construction scheduling.	7	Surveys to begin at start of efficiency conservation in 2008.
Drain Habitat - 1	Creation of managed marsh habitat.	23,682	73 acres to be implemented in 2003, 117 acres to be implemented at start of efficiency conservation period in 2008, plus the balance of 462 acres to be constructed starting in 2017. The maximum total acreage is 652. Water to sustain marsh is included at 12AF/acre/year with 50% from existing drainage and 50% from purchased irrigation water. Irrigation water assumed at \$16/AF. Redundant with SWRCB order.
Drain Habitat - 2	Avoid dredging river deltas between Feb.15 and Aug. 31.	0	No additional costs assumed for scheduling of maintenance dredging.
Drain Habitat - 3	Site surveys to avoid construction disturbance of covered species.	0	No additional costs assumed for crews to survey areas for wildlife prior to beginning work.
Desert Habitat - 1	Worker education program - training and materials.	37	Begins in 2003.

Desert Habitat - 2	Precautions for workers during O&M of canals and drains.	38	Begins in 2003.
Desert Habitat - 3	Habitat surveys, construction monitoring, and vegetation restoration.	436	Begins in 2003.
Desert Habitat - 4	Habitat surveys and update worker manual.	476	Habitat surveys and worker training manual to begin in 2003.
Desert Habitat - 5	Desert habitat acquisition and management.	118	Habitat acquisition and management to begin at start of efficiency conservation in 2008. Maximum acquisition assumes 100 acres.
Owl - 1	Worker education program for canal and drain maintenance.	60	Begins in 2003. Some possible redundancy with Desert Habitat-1.
Owl - 2	Visual inspection of banks. Mark burrows. Develop standard operating procedures.	920	Operating procedures develop in 2006. Habitat protection measures begin at start of efficiency conservation period in 2008.
Owl - 3	Precautions for grading of spoils near canals and ditches.	0	No additional cost assumed for taking precautions during grading of spoils.
Owl - 4	Avoid disturbing burrows. Fill burrows to maintain channel.	2,014	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 5	Manage location and schedule of facility construction.	60	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 6	Maintain current techniques for canal and drain maintenance.	0	No additional cost assumed to maintain current techniques.
Owl - 7	Owl abundance, distribution, and demographic surveys.	532	Begins in 2003.

Agriculture - 1	Install markers on tailwater pump power lines.	40	Marker installation begins at start of efficiency conservation period in 2008.
Agriculture - 2	Plant and maintain cover crops or ridge till lands to conserve water.	360	Begins in 2003.
Other Species - 1	Implement species surveys and submit study program.	738	Begins in 2003.
Other Species - 2	Implement impact avoidance and minimization measures.	817	Begins in 2004.
Monitoring and Adaptive Management	Monitoring and adaptive management described in Chapter 4 of draft HCP.	0	Costs included in individual measures listed above are assumed to cover adaptive management.
TOTAL HCP		60,857	

Estimated 2002 Biological Opinion Portion of HCP Costs

Condition No	Mitigation Measure	Present Value in Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost Items.
15 Year Minimization Plan	Acquire and discharge water to the Salton Sea.	50,000	Water to avoid material change in Salton Sea elevation and salinity for 15 years. Redundant with SWRCB order.
Pupfish CM 2	Pupfish selenium toxicity study. Pupfish and selenium monitoring. Develop mitigation. Study of sources and management of selenium.	939	Begins in 2003. Includes selenium studies required by SWRCB.
Willow Flycatcher CM 1	Willow flycatcher breeding habitat evaluation.	228	Habitat surveys to begin at start of efficiency conservation period in 2008.
Willow Flycatcher CM 2	Habitat monitoring and replacement.	733	Habitat monitoring and replacement to begin at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 3	Long-term monitoring plan.	24	Management plan developed at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 4	Willow flycatcher take evaluation.	0	Addressed by Willow Flycatcher CM 1.
Brown Pelican CM 2	Roost site creation and monitoring.	1,175	No Year 1 capital cost; habitat creation to be implemented in 2009.
TOTAL 2002 BO		53,099	

Estimated CEQA Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost items.
Water Quality			
WQ-2	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-4	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-5	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-7	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
QSA-WR-1	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
Water Quality Subtotal		0	

Agricultural Resources			
AR-1	Prohibit use of non-rotational fallowing. Otherwise, no mitigation measures.	0	No costs for prohibiting use of non-rotational fallowing.
QSA-AR-1	Non-fallowing conservation measures or short term fallowing.	0	Addressed by measure AR-1.
SWRCB-HCP-AR-2	Conversion of up to 700 acres of prime farmland to create habitat.	0	Mitigation determined infeasible. Significant and unavoidable impact.
SWRCB-AR-1	Reclassify up to 50,000 acres of prime farmland or farmland of statewide importance.	0	Addressed by AR-1.
Agricultural Resources Subtotal		0	
Recreation			
R-7	Temporary and permanent relocation of boat launch facilities.	1,600	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 8 boat launch facilities relocated every 3 years through 2040 as necessary.
R-10	Temporary and permanent relocation of camping facilities.	2,889	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 88 campsites relocated every 6 years through 2040 as necessary.
QSA-RR-3	Relocation of Salton Sea recreation facilities or use of Conserved Water.	0	Addressed by measures R-7 and R-10.
SWRCB-R-7	Temporary and permanent relocation of boat launching facilities.	0	Addressed by R-7.
SWRCB-R-8	Reduced sportfishing opportunities.	0	Addressed by 15 Year Minimization Plan.

SWRCB-R-9	Implement SSHCS to avoid salinity impacts.	0	Addressed by 15 Year Minimization Plan and Salton Sea 2.
SWRCB-R-10	Temporary and permanent relocation of campgrounds and ancillary facilities.	0	Addressed by R-10.
Recreation Subtotal		4,489	

Air Quality			
AQ-2	Minimize PM10 emissions during construction and operation of efficiency conservation measures.	1,650	Begins in 2008. Redundant with SWRCB order.
AQ-3	Minimize PM10 emissions during fallowing through conservation measures, soil stabilization, etc.	14,895	Cost includes first year fallowing of 2,500 acres. Begins in 2003.
AQ-4	General conformity determination.	12	Begins in 2008.
AQ-7	Access restriction, research, monitoring. Obtain emission offsets and [or] direct emission reductions at the Sea.	36,774	Monitoring and research begins in 2008. Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan, and be implemented continuously for 20 years.
EJ-2	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
EJ-3	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
QSA-AQ-1	Construction SOPs and agricultural BMPs for dust control.	0	SOPs addressed in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-2	Construction BMPs for NOx, fugitive dust.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-3	Fugitive dust from decline in Salton Sea levels.	0	Addressed by AQ-7.
SWRCB-AQ-3	Dust control measures.	0	Addressed by AQ-3.

SWRCB-AQ-7	Access restriction, research, monitoring. Obtain emission offsets and direct emission reductions at the Sea.	0	Addressed by AQ-7.
Air Quality Subtotal		53,331	
Cultural Resources			
CR-1	Cultural resource surveys prior to construction of water conservation measures.	31	Surveys to begin in 2003. Assumes preconstruction surveys for 100 sites over a 15 year period with 5 sites requiring testing and recovery.
CR-2	Protect cultural resources during construction and operation.	0	Addressed by CR-1.
CR-5	Protect cultural resources during reduced flow to Salton Sea. Conduct archaeological surveys.	87	Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan.
ITA-1	Control of public access on exposed tribal lands.	0	Addressed by CR-5.
QSA-CR-3	Cultural Resource Surveys.	0	Addressed by CR-5.
Cultural Resources Subtotal		118	

Noise			
N-1	Permanent or temporary sound barriers for construction noise sources.	13	Barriers constructed at start of efficiency conservation period in 2008.
N-2	Permanent sound barriers for pumps in noise-sensitive areas.	15	Barriers constructed at start of efficiency conservation period in 2008.
N-3	Permanent sound barriers for interceptor pumps in noise-sensitive areas.	3	Barriers constructed at start of efficiency conservation period in 2008.
N-4	Permanent or temporary sound barriers for noisy equipment.	0	Addressed by N-1 through N-3.
QSA-N-1	Construction BMPs, sound barriers.	0	Addressed by N-1.
	Noise Subtotal	31	

Geologic Resources			
QSA-GSM-1	Minimize soil erosion through watering, paving, limiting vehicle speeds, crusting agents, and construction monitoring.	1,999	Includes storm water planning and related BMPs. PM10 dust control elements addressed by AQ-2.
QSA-GSM-3	Construction BMPs for soil erosion. Monitor water levels for risk of liquefaction.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2, AQ-3 and QSA-GSM-1.
Geologic Resources Subtotal		1,999	
Hazards			
QSA-HHM-1	Assess impacts on local emergency response plans. Complete Phase I studies for potential contamination.	268	Assessment to be implemented at start of efficiency conservation period in 2008. Assumes 10 sites require assessment and 5 sites require a Phase 1 audit.
Hazards Subtotal		268	
Aesthetics			
A-1	Relocate recreation facilities and develop interpretive facilities and materials.	0	Costs addressed in measures R-7 and R-10.
SWRCB-A-1	Aesthetic impacts from drop in Salton Sea level.	0	Addressed by 15 Year Minimization Plan and A-1.
Aesthetics Subtotal		0	
TOTAL CEQA		60,236	

Estimated CESA 2081 Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2003) - Yr 45	Notes and explanation of zero-cost items.
Backwater/Marsh	Create and maintain 16.25 acres of marsh and backwater habitat	1,268	Begins 2003, to be completed within 5 years
TOTAL CESA 2081		1,268	

Note: CESA LCR 2081 cost estimate is for mitigation acreage and actions that are in addition to those required in the 2001 Lower Colorado River BO, and assumes that BO measures will be acceptable as satisfaction of comparable 2081 requirements.

Estimated 2001 Lower Colorado River BO Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2001) - Yr 45	Notes and explanation of zero-cost Items.
Conservation Measure 1	Stock 10,000 sub-adult razorback suckers into the Colorado River	*	Included in funding agreement
Conservation Measure 2	Create, restore, and maintain 38.25 acres of marsh and backwater habitat	*	Included in funding agreement
Conservation Measure 3	Fund the capture of wild-born or F1 generation bonytails	*	Included in funding agreement
Conservation Measure 4	Restore and maintain 186 acres of southwestern willow flycatcher habitat along the LCR between Parker and Imperial Dams	*	Included in funding agreement
TOTAL 2001 BO		3,000	

* Mitigation Measures shall be accomplished through an agreement with the U.S. Bureau of Reclamation, under which Reclamation shall undertake all required measures in the 2001 LCR BO attributable to the transfer of 200,000 AFY in return for payment of \$3 million in 2001 dollars.

EXHIBIT B

EXHIBIT B

HCP Mitigation Requirements

The HCP Mitigation Requirements include the following measures and requirements, all as described in greater detail in the June 2002 Draft HCP and the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service, as applicable:

June 2002 Draft HCP:

General – 1

General – 2

Salton Sea – 2

Salton Sea – 3, except that the survey of the areas designated as shoreline strand and adjacent wetland shall commence in 2018.

Tree Habitat – 1; Tree Habitat – 2; Tree Habitat – 3

Drain Habitat – 1; Drain Habitat – 2; Drain Habitat – 3

Desert Habitat – 1; Desert Habitat – 2; Desert Habitat – 3; Desert Habitat – 4; Desert Habitat – 5

Owl – 1; Owl – 2; Owl – 3; Owl – 4; Owl – 5; Owl – 6; Owl – 7; Owl-8; Owl-9

Pupfish -1; Pupfish -2; Pupfish – 3; Pupfish – 4; Pupfish – 5; Pupfish –6;

Razorback Suckers – 1

Agriculture – 1; Agriculture – 2

Other Species – 1

Other Species – 2

The monitoring and adaptive management requirements described in Chapter 4 of the Draft HCP.

2002 Biological Opinion

The 15-Year Minimization Plan described on page 17-18 of the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service

Pupfish Conservation Measure 2

Willow Flycatcher Conservation Measures 1, 2, 3, and 4

Brown Pelican Conservation Measure 2

Owl - 8	Avoid disturbing burrows. Replace impacted burrows at 2:1 ratio.	344	Habitat replacement to begin at start of efficiency conservation period in 2008.
Owl - 9	Farmer and public education program.	43	Begins in 2003.
Pupfish - 1	Maintain current levels of pupfish habitat.	862	Habitat maintenance to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 2	Minimize selenium impacts on pupfish.	4,383	Drain channel management to begin at start of efficiency conservation in 2008. Redundant with SWRCB order.
Pupfish - 3	Modifications to increase amount of pupfish drain habitat.	3,658	Habitat creation to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 4	Protocol for surveys to monitor pupfish presence.	863	Protocol developed by start of efficiency conservation period in 2008.
Pupfish - 5	Evaluate effect of drain maintenance on pupfish.	45	Study begins at start of efficiency conservation period in 2008.
Pupfish - 6	Gradual dewatering and salvage of stranded pupfish.	3,469	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Razorback Suckers - 1	Salvage fish and return to Colorado River.	40	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.

EXHIBIT D

Exhibit D

Use of Party Funds

<i>Expenditure</i>	<i>Millions (present value as of 2003)</i>
Environmental Mitigation Requirements	
Salinity Control of Salton Sea	\$ 50.0
Other Environmental Mitigation Requirements	<u>\$ 83.0</u>
Total Environmental Mitigation Requirements	\$133.0

EXHIBIT E

Exhibit E

Party Commitments to Fund Environmental Mitigation Costs

<i>Party</i>	<i>Amount (present value as of 2003)</i>
Imperial Irrigation District	\$44,061,350
Coachella Valley Water District	\$36,717,791
San Diego County Water Authority	\$52,220,859
TOTAL	\$133,000,000

CONSERVATION AGREEMENT

AMONG

**THE BUREAU OF RECLAMATION,
IMPERIAL IRRIGATION DISTRICT,
COACHELLA VALLEY WATER DISTRICT, and
SAN DIEGO COUNTY WATER AUTHORITY**

EXHIBIT B

QUANTIFICATION SETTLEMENT AGREEMENT
JOINT POWERS AUTHORITY
CREATION AND FUNDING AGREEMENT

This Quantification Settlement Agreement Joint Powers Authority Creation and Funding Agreement ("Agreement") is dated for reference this 10th day of October, 2003 and made by and among the STATE OF CALIFORNIA acting by and through the DEPARTMENT OF FISH AND GAME ("State"), the COACHELLA VALLEY WATER DISTRICT, ("CVWD"), the IMPERIAL IRRIGATION DISTRICT, ("IID") and the SAN DIEGO COUNTY WATER AUTHORITY, ("SDCWA"). The State, CVWD, IID and SDCWA are sometimes referred to herein, individually and collectively as the "Party" or "Parties". This Agreement is the QSA JPA as referenced in the QSA and the Environmental Cost Sharing Agreement.

RECITALS:

A. The Department of Fish and Game is a state agency formed pursuant to California Fish and Game Code section 700, *et seq.*, and is authorized by the Legislature to enter into this agreement on behalf of the State.

B. The CVWD is a county water district organized under the California County Water District Law.

C. The IID is an irrigation district organized under the California Irrigation District Law.

D. The SDCWA is a county water authority organized under the California County Water Authority Act.

E. Each of the Parties herein is a public agency. Each of the Parties herein is authorized and empowered to contract with the other Parties for the joint exercise of powers under California Joint Exercise of Powers Act and Section 3 of 2003 Stats., ch. 613 (SB 654, Machado) ("SB 654"). A copy of SB 654 is attached to this Agreement as Exhibit A.

F. SB 654 established a mechanism to implement and allocate environmental mitigation cost responsibility among IID, CVWD, SDCWA, and the State for the implementation of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. Costs for environmental mitigation requirements up to and not to exceed a present value of \$133,000,000 shall be borne by IID, CVWD, and SDCWA, with the balance to be borne by the State. Similarly, SB 654 limits the responsibility for payments by IID, CVWD and SDCWA for Salton Sea restoration to a present value of \$30,000,000, in addition to any payments under the provisions of subdivision (c) of Section 2081.7 of the Fish and Game Code, subdivision (f) of Section 1013 of the Water Code, and subdivision (b) of Section 3 of SB 654.

G. IID, CVWD and SDCWA are entering this Agreement in reliance upon, and this Agreement is intended to implement, the provisions of SB 654 which allocates the costs and authorizes the State to accept responsibility for certain environmental mitigation costs. This

Agreement creates the Quantification Settlement Agreement Joint Powers Authority and establishes the respective obligations and limitations of each of the Parties for funding of the joint powers authority and the costs of environmental mitigation. In addition, this agreement establishes certain obligations and limitations related to the costs of Salton Sea Restoration.

H. On or about October 10, 2003, CVWD, IID, and The Metropolitan Water District of Southern California executed that certain Quantification Settlement Agreement (“QSA”) which settles a variety of long-standing Colorado River disputes regarding the priority, use and transfer of Colorado River water, establishes the terms for the further distribution of Colorado River water among those entities for a period of time based upon the water budgets set forth therein and includes as a necessary component thereof the implementation of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. These conserved water transfers and the QSA are critical components of the State's efforts to comply with the California Limitation Act of 1929, Section 4 of the Boulder Canyon Project Act of 1928 and to implement the California Constitutional mandate of Article X, Section 2. Neither the QSA or these conserved water transfers could be implemented without compliance with extensive state and federal environmental laws, and this Agreement including the State Obligation is the principal mechanism for ensuring that required mitigation under those laws for these transfers will be fully paid for.

I. The terms of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement are subject to the implementation of a mechanism to resolve and allocate environmental mitigation responsibility between those Parties on the terms and conditions set forth in that certain Environmental Cost Sharing, Funding and Habitat Conservation Plan Development Agreement among CVWD, IID, and SDCWA (“ECSA”). A copy of the ECSA is attached to this Agreement as Exhibit B.

J. This Agreement is necessary to (1) allocate among the State, the CVWD, the IID and the SDCWA Environmental Mitigation Costs; (2) make certain and limit the financial liability of the CVWD, the IID and the SDCWA for Environmental Mitigation Costs; (3) make certain and limit the financial liability of the CVWD, the IID and the SDCWA for Salton Sea restoration costs; and (4) allocate the remaining financial and other risks associated with the Environmental Mitigation Requirements and Salton Sea restoration costs to the State.

K. CVWD, IID and SDCWA have agreed to substantial commitments of water, money, and other valuable resources to implement the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, among which are commitments of funds to mitigate environmental impacts of those agreements and to promote restoration of the Salton Sea. These commitments would not have been made without the promises of the State as documented in this Agreement. In addition, IID, CVWD and SDCWA are relying upon this Agreement in entering into other agreements with third parties, including without limitation, contracts with landowners and farmers in the Imperial Valley who are to produce conserved water.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS, PROMISES AND THE PROVISIONS, CONDITIONS AND TERMS PROVIDED HEREIN, THE PARTIES HERETO AGREE AS FOLLOWS:

ARTICLE I

DEFINITIONS AND PRELIMINARY PROVISIONS

1.1 Definitions.

As used in this Agreement, capitalized terms not defined below shall have the meaning set forth in the ECSA and, if not defined therein, in the QSA.

a. “Canal Lining Project” shall mean the design and construction of lining in portions of the All-American Canal and the Coachella Canal, as authorized by Public Law 100-675, which qualifies for funding pursuant to the California Water Code sections 12560, *et seq.* as amended by Section 1 of 2003 Stats., ch. 613 (SB 654, Machado).

b. “Environmental Mitigation Cost Limitation” shall mean (i) a present value equal to \$133,000,000 of the payments by the CVWD, the IID and the SDCWA pursuant to this Agreement. Environmental Mitigation Cost Limitation with respect to the CVWD, the IID or the SDCWA, separately, shall mean the individual obligation for a portion of the amount of \$133,000,000 allocated to each agency respectively by Article IX of this Agreement. When used in the context of the Environmental Mitigation Cost Limitation, the words “liable” or “liability” mean any responsibility or obligation arising out of or related to any claim, demand, cause of action, cost, expense, condition or restriction, and shall include, without limitation, damages, fees, fines, penalties, assessments, permit conditions, litigation cost, attorneys’ fees, administrative requirements, in-kind contributions, adaptive management requirements, and cost-sharing requirements.

c. “Restore” and “Restoration” shall have the same meaning as such terms are used in the QSA Legislation.

d. “Salton Sea Restoration Limit” shall mean a present value equal to \$30,000,000 of the payments made by the CVWD, the IID or the SDCWA to the Salton Sea Restoration Fund. Salton Sea Restoration Limit with respect to the CVWD, the IID or the SDCWA, separately, shall mean the individual obligation for a portion \$30,000,000 limit for each agency respectively by Article XIV of this Agreement. When used in the context of the Salton Sea Restoration Limit, the words “liable” or “liability” mean any responsibility or obligation arising out of or related to any claim, demand, cause of action, cost, expense, condition or restriction, and shall include, without limitation, damages, fees, fines, penalties, assessments, permit conditions, litigation cost, attorneys’ fees, administrative requirements, in-kind contributions, adaptive management requirements, and cost-sharing requirements. The Salton Sea Restoration Limit is exclusive of Salton Sea restoration funding provided pursuant to the provisions of subdivision (c) of Section 2081.7 and subdivision (f) of Section 1013 of the Water Code.

e. “State” shall mean the State of California.

1.2 Present Value of Amounts.

The amounts stated in subdivisions b and c of Section 1.2 and in Articles IX and XIV are in 2003 dollars and are expressed as present-value totals. The present value of these amounts shall be calculated using a six percent discount factor.

ARTICLE II

CREATION OF THE QUANTIFICATION SETTLEMENT AGREEMENT
JOINT POWERS AUTHORITY

2.1. Creation of Agency.

There is hereby created a public agency known as the "Quantification Settlement Agreement Joint Powers Authority" (the "Authority"). The Authority is formed by this Agreement pursuant to the provisions of the Joint Exercise of Powers Act, being Article I, Chapter 5, Division 7, Title 1 of the Government Code of the State of California commencing at Section 6500, as supplemented by 2003 Stats., ch. 613 (SB 654 Machado). The Authority is a public agency separate from the Parties.

2.2. Purpose of Authority.

The purpose of this Authority is to pay for Environmental Mitigation Requirements and Environmental Mitigation Costs by and through the collection, holding, investing and disbursing of funds.

ARTICLE III

POWERS OF THE AUTHORITY

3.1 General Powers.

The governing body of the Authority shall have the power, in the Authority's own name, and as necessary or convenient to implementation of the Authority's purpose, to do any and all of the following:

(a) To make and enter into contracts, including, without limitation contracts with one or more of the Parties.

(b) To employ agents, employees, attorneys, consultants, advisors, and independent contractors.

(c) To incur debt, liabilities or obligations provided, however, that no debt, liability or obligation shall directly or indirectly result in a liability of the CVWD, the IID or the SDCWA in excess of the Environmental Mitigation Requirement Cost Limitation or the Salton Sea Restoration Limit. The Authority may issue revenue bonds, contracts of indebtedness,

certificates of participation and other finance instruments pursuant to any State statute applicable to any of the Parties. Action under this subdivision requires the affirmative vote of three Commissioners, including the Commissioner representing the State.

(d) To disburse funds to one or more of the Parties to pay for the implementation of the Environmental Mitigation Requirements, in accordance with a budget adopted by the governing body.

(e) To sue and be sued in its own name.

(f) To accumulate reserve funds for the purposes herein.

(g) To apply for, receive and utilize gifts, grants, and loans from any source available.

(h) To acquire, by grant, lease, purchase, bequest, devise, and hold, enjoy, lease or sell, or otherwise dispose of real and personal property.

(i) To invest surplus funds pursuant to Government Code § 6509.2, subject to Government Code §§ 53600 *et seq.* Interest or other earnings on funds contributed for Environmental Mitigation Costs shall be used exclusively for the payment of such costs.

(j) To adopt rules, policies, by-laws, regulations and procedures governing the operation of the Authority consistent with this Agreement.

(k) To take other actions necessary or convenient for the full exercise of the powers granted by this Agreement.

3.2 Limitation on Powers.

The Environmental Mitigation Cost Limitation and the Salton Sea Restoration Limit have been established pursuant to subparagraph (1) of subdivision (b) and subdivision (c) of Section 3 of SB 654. The Authority shall have no power to incur any debt, liability or obligation that would directly or indirectly result in any liability to the CVWD, the IID or the SDCWA in excess of the Environmental Mitigation Cost Limitation or the Salton Sea Restoration Limit. The liability for any Environmental Mitigation Requirements in excess of the Environmental Mitigation Cost Limitation or any funding obligation or in-kind contributions of any kind for restoration of the Salton Sea, including federal cost-sharing or other federal requirements, shall be borne exclusively by the State and sources other than the CVWD, the IID or the SDCWA, except for restoration funding provided pursuant to the requirements of subdivision (c) of Section 2081.7 and subdivision (f) of Section 1013 of the Water Code.

3.3 Limitation of Liability of Parties.

The debts, liabilities and obligations of the Authority shall be the debts, liabilities and obligations of the Authority alone and not of the Parties or any Party.

3.4 Contracts.

The procedures and requirements applicable to contracts of the SDCWA shall apply to contracts of the Authority, provided, however, that all contracts shall be approved by the Commission.

3.5 Exercise of Powers.

The Authority shall be subject to the same restrictions upon the manner of exercising its powers as the restrictions upon the manner of exercising the powers of the SDCWA, unless otherwise provided herein.

ARTICLE IV

TERM

4.1 Effective Date.

This Agreement shall become effective and the Authority shall be created at the latter of the following events: (a) when the governing bodies of all of the Parties to this Agreement have authorized execution of this Agreement; or (b) January 1, 2004.

4.2 Termination Date.

This Agreement shall terminate on the later of (1) the mutual Termination Date of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, or (2) when all Environmental Mitigation Requirements have been satisfied and the costs thereof fully paid, unless terminated sooner by written consent of each of the Parties evidenced by a certified copy of a resolution of its respective governing bodies.

4.3 Limitation on Withdrawal.

No Party to this Agreement may withdraw from the Authority without the express written consent or approval of all of the remaining Parties. Any attempted withdrawal by a Party not made in accordance with this Agreement shall be deemed a breach of this Agreement and the breaching Party shall be liable to the non-breaching Parties for the remainder of any sums owed by the Party under the ESCA and this Agreement, the Party's allocation of administrative expenses for the fiscal year in which the breach occurred and for the following fiscal years and for any damages for such breach.

ARTICLE V

GOVERNING BOARD

5.1 The Commission.

The governing body of the Authority shall be known as the "Commission" for the Authority. The Commission shall be composed of four (4) members ("Commissioners"), one from each Party to this Agreement. All of the power and authority of the Authority shall be exercised by the Commission.

5.2 Appointments to the Commission.

The CVWD, the IID and the SDCWA shall each designate and appoint one (1) member of its governing board to act as its Commissioner and one (1) member of its governing body to act as its alternate Commissioner. In lieu of appointing a member of its governing body, the CVWD, the IID or the SDCWA may appoint its general manager or a member of its staff as a Commissioner or alternate Commissioner. The manner of appointment of the Commissioner and alternate Commissioner shall be determined by the appointing agency, subject to the consent of the agency's governing body. The Director of the Department of Fish and Game or his or her designee shall be the Commissioner representing the State. The Director of the Department shall also designate an alternate. During any absence of the Commissioner, the alternative Commissioner shall act in his place. Each Commissioner (and alternate), other than the Commissioner representing the Department shall serve at the pleasure of the governing body of the appointing Party and may be removed at any time, with or without cause, in the sole discretion of the Party's governing body.

5.3 Commissioners to Serve Without Compensation from Authority.

The Commissioners and alternate Commissioners shall serve without compensation from the Authority. Each Party shall be responsible for paying the expenses of the Commissioner and alternate Commissioner of the Party incurred in connection with Authority business according to the law and policies applicable to the Party.

5.4 Resignation of Commissioners.

Any Commissioner or alternate Commissioner may resign at any time by giving notice to the Chairperson of the Authority and the presiding officer of the Party. Any such resignation shall be effective upon receipt of such notice or at any later time specified in the notice.

5.5 Vote by Commissioners.

Unless otherwise disqualified pursuant to California law because of a personal financial or other conflict of interest, a Commissioner, or an alternate Commissioner when acting in the absence of the Commissioner, may vote on all matters of Authority business, including, without limitation, contracts between the Authority and the appointing Party.

5.6 Local Conflict of Interest Code.

The Commission shall adopt a local conflict of interest code pursuant to the provisions of the Political Reform Act.

ARTICLE VI

CONDUCT OF MEETINGS

6.1 Meetings.

The Commission of the Authority shall establish a regular meeting schedule. At its first meeting, the Commission shall provide for the time and place of holding its regular meetings. Special meetings may be called at the request of the Chairperson or of a majority of the Commissioners. Notice of and the agenda for all meetings shall be furnished in writing to each Commissioner (and alternate) and to each Party to this Agreement. The meetings of the Commission shall be noticed, held and conducted in accordance with the provisions of the Ralph M. Brown Act as set forth in the California Government Code. The Commission may adopt supplemental rules of procedure for the conduct of meetings.

6.2 Minutes.

The Secretary of the Authority shall cause to be kept the minutes of all Commission meetings, and shall cause a copy of these minutes, along with copies of all ordinances and resolutions enacted, to be forwarded to each of the Parties hereto.

6.3 Quorum.

Three members of the Commission shall constitute a quorum for the transaction of business. In the absence of a Commissioner, the alternate Commissioner, if present, shall be counted for purposes of determining a quorum.

6.4 Actions.

Unless otherwise provided herein, all actions of the Commission shall be passed upon the affirmative vote of three Commissioners. Actions may be taken by resolution or motion recorded in the minutes.

ARTICLE VII

OFFICERS

7.1 Chairperson.

The Commissioner representing the State shall act as Chairperson of the Commission. The Chairperson is the presiding officer of the Commission. The Chairperson and shall be recognized as the head of the Authority for all ceremonial and public purposes, and for the signing of legal instruments and documents of the Authority. At meetings of the Commission, the Chairperson shall not be deprived of any of the rights and privileges of a Commissioner by reason of being presiding officer. The alternate Commissioner representing the State shall serve as Chairperson in the absence of the State's Commissioner.

7.2 Vice-chairperson.

The Commission may select one of its members to serve as Vice-chairperson. The Vice-chairperson is the presiding officer of the Commission in the absence of the Chairperson. The Vice-chairperson shall perform the duties of the Chairperson whenever the Chairperson is absent, temporarily incapacitated from performing the duties of the Chairperson, or as may be delegated by the Chairperson. The Vice-chairperson shall serve at the pleasure of the Commission.

7.3 Additional Officers.

The Commission may appoint such additional officers to perform such duties and shall have such powers as the Commission may, from time to time, determine.

7.4 Service of Vice-chairperson or Additional Officers.

Subject to the provisions set forth herein, the officers shall be appointed annually in January. Officers shall assume the duties of their offices immediately after their appointment and shall hold office until their successors are appointed, except in the case of their earlier removal or resignation. Vacancies shall be filled by appointment of the Commissioners and such appointee shall hold office until the appointment of his or her successor.

ARTICLE VIII

MANAGEMENT

8.1 Chief Administrative Officer.

The General Manager of the SDCWA or an employee of the SDCWA designated by the General Manager of the SDCWA shall serve as the Chief Administrative Officer of the Authority. Such service shall be without compensation by the Authority. The Chief Administrative Officer is responsible for the efficient administration of the affairs of the Authority. The Chief Administrative Officer shall serve as secretary to the Commission and

shall keep the minutes and records of the Authority. The records of the Authority are subject to the California Public Records Act. The SDCWA shall not receive economic remuneration from the Authority or the other Parties for provision of administrative management services under this paragraph.

8.2 Treasurer.

The Treasurer of the SDCWA shall serve as the treasurer of the Authority. The treasurer shall be the depository and have custody of all of the money of the Authority from whatever source. The duties of the treasurer shall be performed in accordance with Government Code § 6505.5 without compensation or charge to the Authority, provided, however, that the treasurer may contract with a certified public accountant, public accountant or other qualified independent auditor to make an annual audit of the accounts and records of the Authority as provided in Government Code § 6505 and may charge the costs thereof to the Authority as a reimbursable expense. The treasurer may contract with qualified investment, financial and other advisors and may charge the costs thereof to the Authority as a reimbursable expense. Except as otherwise provided herein, the SDCWA shall not receive economic remuneration from the Authority or the other Parties for provision of treasurer services under this paragraph. The Treasurer may invest funds of the Authority according to an investment policy of the Commission adopted pursuant to Government Code §§ 53600 *et seq.* Until such an investment policy is adopted, the investment policy of the SDCWA shall apply to investment of Authority funds.

8.3 Legal Counsel.

The chief legal counsel of CVWD shall serve as legal counsel to the Authority. In the event of an ethical conflict of interest arising from a direct dispute between the Authority and any of the Parties, the Authority shall retain independent legal counsel the cost of which shall be borne by the Parties. The CVWD shall not receive economic remuneration from the Authority or the other Parties for provision of legal services under this paragraph. Litigation services, if needed, are to be provided subject to a contract with qualified counsel after approval by the Commission, and shall be paid pursuant to Section 10.4.

8.4 Agent for Service of Process.

The Chief Administrative Officer of the Authority is the Authority's agent for service of process.

8.5 Authority's Business Offices.

Authority's business office shall be located at the principal place of business of the SDCWA, which on the date of this agreement is 4677 Overland Ave., San Diego, CA 92123. SDCWA shall make its personnel available, during the term of this Agreement as necessary to perform the secretarial, clerical, accounting and administrative duties of the Authority without remuneration, cost or expense of any kind to the Authority or the other Parties, except as otherwise provided in Article X.

8.6 Roster of Public Agencies.

The Chief Administrative Officer shall register the Authority in the roster of public agencies pursuant to Government Code § 53051.

ARTICLE IX

CONTRIBUTIONS FOR ENVIRONMENTAL
MITIGATION REQUIREMENTS

9.1 Environmental Mitigation Contributions.

The CVWD, the IID and the SDCWA shall make contributions to the Authority having a present value of the following amounts:

CVWD	\$36,717,791
IID	\$30,000,000
SDCWA	\$52,220,859

The IID shall also make an additional contribution pursuant its obligation under Section 4.1(2) of the ECSA having a present value of \$14,061,350. Payments shall be made according to the schedules attached as Exhibits C-1, C-2 and C-3, unless paid in advance.

9.2 State Obligation.

The State is solely responsible for the payment of the costs of and liability for Environmental Mitigation Requirements in excess of the Environmental Mitigation Cost Limitation. The amount of such costs and liabilities shall be determined by the affirmative vote of three Commissioners, including the Commissioner representing the State, which determination shall be reasonably made. The State obligation is an unconditional contractual obligation of the State of California, and such obligation is not conditioned upon an appropriation by the Legislature, nor shall the event of non-appropriation be a defense.

9.3 Remaining Environmental Mitigation Costs.

The State shall have the rights under Section 4.2(2) of the ECSA to reduce its possible obligation to pay Remaining Environmental Mitigation Costs.

9.4 Environmental Mitigation Costs Following Termination of 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement.

The Authority shall have the rights and obligation under Section 4.3(3) and (4) of the ECSA.

9.5 Adjustment of Payment Schedules.

The CVWD, the IID or the SDCWA may adjust its respective payment schedule identified in Exhibit C-1, C-2 or C-3 so long as the adjustment does not affect the Authority's ability to pay Environmental Mitigation Costs subject to Environmental Mitigation Cost Limitation. If the Authority issues debt, the Party or Parties whose schedule of payments provides the revenue to repay the debt shall (i) reimburse the Authority for the amount, if any, debt service payments exceed the amount required if the Authority borrowed money at an annual interest rate of 6% compounded annually, and (ii) shall receive a credit against its schedule of payments for the amount, if any, debt service payments are less than they would be if the Authority had borrowed money at an annual rate of 6% compounded annually. Payments actually made by a Party toward Environmental Mitigation Costs after October 10, 2003 and before the Effective Date of this Agreement shall be credited to that Party's payment obligation under this Agreement. Additionally, SDCWA shall receive a credit toward its payment obligations under this Agreement, not to exceed a present value of \$3,118,000, for payments made to the Bureau of Reclamation for satisfaction of Environmental Mitigation Requirements pursuant to that agreement among the Bureau of Reclamation, MWD, and SDCWA, dated October 10, 2003, regarding responsibility for implementation of Conservation and Mitigation Measures for the Colorado River described in a U.S. Fish and Wildlife Service Biological Opinion dated January 12, 2001.

ARTICLE X

BUDGET, CONTRIBUTION FOR THE COST AND
EXPENSES OF THE AUTHORITY AND PAYMENTS BY THE AUTHORITY

10.1 Annual Budget.

As soon as possible after the formation of the Authority and annually thereafter, the Commission shall adopt a budget for the payment of Environmental Mitigation Costs. The budget shall be prepared in sufficient detail to constitute an operating outline for contributions to be made by the Parties and expenditures to be made during the ensuing year to pay for the Environmental Mitigation Costs. The budget shall include payments to IID for Salton Sea mitigation water consistent with Exhibit D. The affirmative vote of three Commissioners, including the Commissioner representing the State, is required for action under this section, and the approval of each shall not be unreasonably withheld after giving meaningful consideration to the need for timely implementation of any Environmental Mitigation Requirement and the appropriate procurement or maintenance of any permit, approval, authorization, or other requirement, of any Environmental Mitigation Requirement.

10.2 Financing Plan.

The Commission may adopt a long-term financing plan to assure that sufficient funds are available to meet the reasonably expected annual costs of paying for the Environmental Mitigation Requirements. In the event that the Authority is required to issue debt, in any form, the Party or Parties whose schedule of payments provides the revenue to repay the debt shall incur the costs of issuance and the adjustments as provided for in Section 9.3. The affirmative

vote of three Commissioners, including the Commissioner representing the State, is required for action under this section.

10.3 Reimbursement to Parties of Direct Costs Incurred for Environmental Mitigation.

A Party that incurs Direct costs for Environmental Mitigation Costs under the approved budget will be reimbursed by the Authority. Reimbursement shall be made only upon submission of a cost report signed by the treasurer or controller of the Party and determination of the Authority that the report substantially conforms to the requirements of this Section. The cost report shall be in a form and contain the information specified by the Commission. The cost report shall be based upon proper accounting records maintained by the Party. The accounting records shall be open to inspection by the Authority or any other Party. The Authority's determination regarding a cost report shall be made within thirty days of submission. Reimbursement shall be made by the Authority within thirty days following determination of the Authority that the report conforms with the requirements of this section. If the Authority determines that a report does not comply with the requirements of this section, the Party submitting the report may submit a revised report, which shall then be considered in the same manner as an initial report. If any portion of an approved reimbursement is not timely paid, the delinquent amount will bear interest at the rate earned by the Authority on its investments, but not to exceed twelve percent interest per annum compounded monthly. Direct costs shall mean Costs, other than out-of-pocket costs, as defined in the ESCA, but shall not include a Party's administrative costs, overhead costs, staff costs, losses of revenue from any source, other opportunity costs of any kind and other similar indirect costs as determined by the Commission not inconsistent with the ESCA.

10.4 Environmental Litigation Costs.

Environmental Litigation Costs shall be paid as set forth in Section 3.2 of the ECSA.

ARTICLE XI

CONTRIBUTION PROCEDURE FOR AMOUNTS EXTRAORDINARY ADMINISTRATIVE AND OTHER REIMBURSABLE EXPENSES

11.1 Extraordinary Administrative and Other Reimbursable Expenses.

The Commission may, upon request by the SDCWA reimburse the SDCWA for extraordinary administrative costs and other reimbursable expenses incurred on behalf of and at the specific request of the Authority. The Commission shall pay for legal, accounting, and other special professional services employed by the Authority and not otherwise provided by a Party. Upon authorization of such expenses by the Commission, each Party shall provide for equal contributions toward the total amount of the approved expenditure. Contributions for extraordinary administrative costs shall be in addition to the contributions for the payment of Environmental Mitigation Requirements and shall not count towards the Environmental Mitigation Cost Limitation.

11.2 Time of Payment.

The contribution of each Party for allowed costs under Section 11.1 shall be billed quarterly and due and payable thirty (30) days after receipt of a billing therefor from the Authority. Unpaid contributions shall bear interest at the legal rate of interest from the date due to the date paid.

ARTICLE XI

ACCOUNTING

12.1 Fiscal Year.

The fiscal year of the Authority shall be from July 1 of a year to June 30 of the following year.

12.2 Books and Accounts.

Full books and accounts shall be maintained by the treasurer in accordance with practices established by or consistent with those utilized by the Controller of the State of California for like public agencies. Subject to the provisions of paragraph 8.2, the treasurer of the Authority shall comply strictly with the requirements of the statutes governing joint power agencies, Chapter 5, Division 7, Title 1 of the Government Code, commencing with Section 6500.

12.3 Filing Annual Audit.

The annual audit of the accounts of the Authority shall be filed with each Party no later than fifteen (15) days after receipt of the audit by the Commission.

ARTICLE XIII

DISSOLUTION OR TERMINATION

13.1 Distribution of Residual.

Dissolution or termination shall not relieve any Party of its obligation to pay for Environmental Mitigation Requirements under this Agreement. Upon dissolution or termination of the Authority any residual funds remaining after payment in full of all Environmental Mitigation Requirements shall be distributed to the Salton Sea Restoration Fund, and any remaining funds due from a Party shall be paid by that party directly to the Salton Sea Restoration Fund.

13.2 Manner of Distribution.

The distribution of assets may be made in kind or assets may be sold and the proceeds thereof distributed to a Party at the time of withdrawal or to the Parties at the time of dissolution.

ARTICLE XIV

FUNDING LIMITATION

14.1 Funding Limitation for Environmental Mitigation Requirements.

The liability of the CVWD, the IID and the SDCWA for Environmental Mitigation Requirements or Environmental Mitigation Costs shall not exceed the Environmental Mitigation Cost Limitation. The State shall defend, indemnify and hold harmless the CVWD, the IID and the SDCWA, individually or collectively as the case may be, with respect to any Environmental Mitigation Requirement or Environmental Mitigation Cost which exceeds the Environmental Mitigation Cost Limitation.

14.2 Cooperation Regarding State Obligation.

If the Authority anticipates that the Environmental Mitigation Cost Limitation will be exceeded within two years, then the Authority shall submit a written notice to the State stating the reasons for that anticipation, as well as estimates of the projected cost of remaining Environmental Mitigation Requirements. The State will seek, with the support of the other Parties, to obtain Legislative appropriation of funds sufficient to satisfy the State obligation, if any, for costs of the Environmental Mitigation Requirements as soon as it appears that the expenditures of the Authority are within \$5,000,000 of the Environmental Mitigation Requirement Cost Limitation, so long as the Authority has encumbered the total amount owed pursuant to Article IX by the CVWD, the IID and the SDCWA.

14.3 Funding Limitation for Salton Sea Restoration Costs.

In accordance with this Agreement and as required by the State agency responsible for administration of the Salton Sea Restoration Fund, the CVWD, the IID and the SDCWA shall make contributions to the Salton Sea Restoration Fund having a present value of the following amounts:

CVWD	\$ 8,282,209
IID	\$ 9,938,650
SDCWA	\$11,779,141

IID's payments to the Salton Sea Restoration Fund shall not exceed in any year the amounts set forth on Exhibit E., unless IID consents.

The liability of the CVWD, the IID and the SDCWA for Salton Sea restoration costs shall not exceed the Salton Sea Restoration Limit. The State shall defend, indemnify and hold harmless the CVWD, the IID and the SDCWA, individually or collectively as the case may be,

with respect to any liability, requirement, expense, cost or obligation for restoration of the Salton Sea the cost of which exceeds the Salton Sea Restoration Limit.

ARTICLE XV

GENERAL PROVISIONS

15.1 Governing Law.

This Agreement is entered into in the Counties of Riverside, Imperial and San Diego, California and shall be governed by and construed in accordance with the laws of the State of California.

15.2 Severability and Waiver.

In the event that any term or condition of this Agreement is determined to be invalid, illegal or otherwise unenforceable, this Agreement shall be terminated unless the Parties otherwise consent to continuation of the Agreement without the severed provision. If the CVWD, the IID, or the SDCWA have made payments or incurred unreimbursed Direct costs for the Environmental Mitigation Requirements or for the Salton Sea Restoration Fund as provided in this Agreement, then the obligations of the State under Sections 9.2, 14.1 or 14.3 shall remain in full force and effect as to the party making such contribution notwithstanding the severance of any provision, or termination of this Agreement pursuant to this Section. Lack of enforcement of any term or condition of this Agreement shall not be construed as a waiver of any rights conferred by such term or condition. Unless otherwise agreed to in writing, the failure of any Party to require the performance by the other Party of any provision hereof shall in no way affect the full right to require such performance at any time thereafter, nor shall the waiver of any provision hereof on one occasion be taken or held to be a waiver of the provision itself.

15.3 Binding Effect.

This Agreement shall be binding on the Parties and their respective successors and assigns, provided that assignment of this Agreement shall require consent of the other Parties.

15.4 Authority to Execute.

Any person signing this Agreement represents that he/she has full power and authority to do so, and, that his/her signature is legally sufficient to bind the Party on whose behalf he/she is signing.

15.5 Integrated Agreement.

This Agreement contains the entire understanding of the Parties with respect to the subject matter hereof, and supersedes any prior understanding between the Parties, except as set forth herein, whether written or oral. This Agreement can be amended only in writing signed by the Parties.

15.6 Time of the Essence.

Time is of the essence of this Agreement.

15.7 Notices.

Any communication, notice or demand of any kind whatsoever which any Party may be required or may desire to give to or serve upon the other Party shall be in writing and delivered by personal service (including express or courier service), by electronic communication, whether by telex, telegram or telecopying (if confirmed in writing sent by registered or certified mail, postage prepaid, return receipt requested), or by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

State of California c/o Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

CVWD: Coachella Valley Water District
Attention: General Manager/Chief Engineer
P. O. Box 1058
Coachella, CA 92236

for personal or overnight delivery:

Coachella Valley Water District
Attention: General Manager/Chief Engineer
Avenue 52 and Highway 111
Coachella, CA 92236

Telephone: 760-398-2651
Facsimile: 760-398-3711

Copy to: Gerald D. Shoaf, Esq.
Steven B. Abbott, Esq.
Redwine and Sherrill
1950 Market Street
Riverside, CA 92501-1720
Telephone: 909-684-2520
Facsimile: 909-684-9583

IID: Imperial Irrigation District
Attn: General Manager
P.O. Box 937
Imperial, CA 92251
Telephone: 760-339-9477
Facsimile: 760-3339-9392

for personal or overnight delivery:

Imperial Irrigation District
Attn: General Manager
333 E. Barioni Boulevard
Imperial, CA 92251

Copy to: John P. Carter
Horton, Knox, Carter & Foote
895 Broadway
El Centro, CA 92243
Telephone: 760-482-9651
Facsimile: 760-370-0900

SDCWA: San Diego County Water Authority
Attn: General Manager
4677 Overland Ave.
San Diego, CA 92123
Telephone: 858-522-6780
Facsimile: 858-522-6562

Copy to: San Diego County Water Authority
Attn: General Counsel
4677 Overland Ave.
San Diego, CA 92123
Telephone: 858-522-6790
Facsimile: 858-522-6562

Any Party may change its address for notice by written notice given to the other Parties in the manner provided in this subsection 15.7. Any such communication, notice or demand shall be deemed to have been duly given or served on the date personally served, if by personal service; one (1) day after the date of confirmed dispatch, if by electronic communication, or three (3) days after being placed in the U.S. mail, if mailed.

15.8 Further Acts.

Each Party agrees to perform any further acts and to execute and deliver any documents that may be reasonably necessary to carry out the provisions of this Agreement.

15.9 Interpretation.

The provisions of this Agreement shall be construed as to their fair meaning, and not for or against any Party based upon any attribution to such Party as the source of the language in question.

15.10 Counterparts.

This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which, when taken together, shall constitute one and the same instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon, provided such signature page is attached to another counterpart identical thereto, except for having additional signature pages executed by another Party to this Agreement attached thereto.

15.11 Third Party Beneficiaries

This Agreement, other than with respect to Section 9.2, is made solely for the benefit of the Parties hereto and their respective successors and assigns. No other person or entity may have or acquire any right by virtue of this Agreement.

15.12 Additional Parties.

Additional parties may join this agreement only upon the amendment of this agreement consented to by all the existing Parties.

15.13 Remedies.

Each Party shall have all remedies available at law or in equity to enforce the terms of this Agreement. The State shall have the power to sue and be sued in any court of competent jurisdiction.

15.14 Joint Defense.

The Parties and the Authority will cooperate, proceed with reasonable diligence, and use reasonable best efforts to defend any lawsuit or administrative proceeding challenging the validity or enforceability of any terms of this Agreement, or any Party's right to act in accordance with any of the terms of this Agreement. Each Party will bear its own costs of participating and representation in any such defense.

15.15 No Waiver of Sovereign Immunity.

Notwithstanding any other provision of this Agreement, nothing herein is intended to constitute consent by the State of California or any of its departments, agencies, commissions, or boards to suit in any court described in Article III of the U.S. Constitution. This Agreement shall not waive, or be interpreted as waiving, the State of California's sovereign immunity under the

Eleventh Amendment or any other provision of the U.S. Constitution in any present or future judicial or administrative proceeding.

IN WITNESS WHEREOF the Parties hereto have executed this Agreement on the day and year hereinafter indicated.

STATE OF CALIFORNIA, acting by and through the Department of Fish and Game

By Robert C. Wright
Title _____

Attest:

By _____

Approved as to Form and Content:

By _____

COACHELLA VALLEY WATER DISTRICT, a California county water district

By Steven Robbins
| Steven Robbins
Its General Manager/Chief Engineer

Approved as to Form and Content:

REDWINE AND SHERRILL

By Gwendolyn Sherrill

IMPERIAL IRRIGATION DISTRICT, a California irrigation district

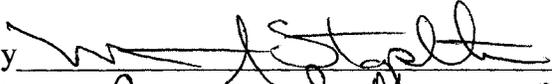
By [Signature]
Its PRESIDENT

By Gloria A Rivera
Its Secretary

Approved as to Form and Content:

By [Signature]

SAN DIEGO COUNTY WATER
AUTHORITY

By 
Its General Manager

By _____
Its _____

Approved as to Form and Content:

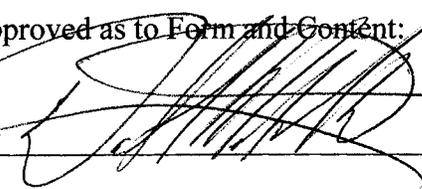
By 

EXHIBIT A
SB 654 (MACHADO)

Senate Bill No. 654

CHAPTER 613

An act to amend Section 12562 of the Water Code, and to amend Section 1 of Chapter 617 of the Statutes of 2002, relating to water, and making an appropriation therefor.

[Approved by Governor September 29, 2003. Filed with Secretary of State September 29, 2003.]

LEGISLATIVE COUNSEL'S DIGEST

SB 654, Machado. Water: Salton Sea: Colorado River.

(1) Existing law appropriates General Fund moneys to, among other things, line portions of the All American Canal and the Coachella Branch of the All American Canal. Existing law requires the lining projects to be completed not later than December 31, 2006, or such later date as may be required by extraordinary circumstances.

This bill would make legislative findings as to the extraordinary circumstances that prevent the lining projects from being completed by December 31, 2006, and would extend the date to December 31, 2008.

(2) Existing law makes legislative findings concerning the Salton Sea and a Quantification Settlement Agreement, including a finding that species previously designated as fully protected may be taken during activities intended to meet the state's commitment to reduce its use of Colorado River water, as long as those activities are found to comply with existing law.

This bill would, instead, make findings permitting the taking incidental to those activities.

(3) Existing law provides for a California's Colorado River Water Use Plan, and for a Quantification Settlement Agreement.

This bill would make a legislative finding and declaration that in order to resolve conflicts that have prevented the implementation of California's Colorado River Water Use Plan it is necessary to provide a mechanism to implement and allocate environmental mitigation responsibility between water agencies and the state for the implementation of the Quantification Settlement Agreement. The bill would permit the Department of Fish and Game to enter into a joint powers agreement for the purpose of providing for the payment of costs for environmental mitigation requirements, and would specify the costs to be paid by the agencies that are parties to the agreement. By authorizing the department to enter into the agreement, this bill would

make an appropriation by authorizing expenditures from the continuously appropriated Fish and Game Preservation Fund.

(4) This bill would become operative only if SB 277 and SB 317 are both chaptered and become effective on or before January 1, 2004.

Appropriation: yes.

The people of the State of California do enact as follows:

SECTION 1. Section 12562 of the Water Code is amended to read:

12562. (a) (1) In furtherance of implementing and achieving the goals of the "California Plan," the sum of two hundred million dollars (\$200,000,000) in the account shall be used by the director to finance and arrange for lining portions of the All American Canal and the Coachella Branch of the All American Canal.

(2) The canal lining projects shall be completed not later than December 31, 2008, or such later date as may be required by extraordinary circumstances.

(3) The allocation of the water conserved from the canal lining projects and to be made available to the Metropolitan Water District of Southern California shall be consistent with federal law and shall be determined by an agreement among the Metropolitan Water District of Southern California, the Imperial Irrigation District, the Palo Verde Irrigation District, the Coachella Valley Water District, and the San Luis Rey settlement parties, reached after consultation with the director and the United States Secretary of the Interior.

(b) (1) The sum of thirty-five million dollars (\$35,000,000) from the account shall be used by the director to finance the installation of recharge, extraction, and distribution facilities for groundwater conjunctive use programs necessary to implement the "California Plan."

(2) Water stored in connection with the groundwater conjunctive use programs described in paragraph (1) shall be for the benefit of the member public agencies of the Metropolitan Water District of Southern California.

(3) Nothing in this subdivision limits the ability of the Metropolitan Water District of Southern California to enter into agreements regarding the sharing of any water made available under this subdivision.

(c) The Legislature finds that the extension of the date from December 31, 2006, to December 31, 2008, for completing the canal project linings under paragraph (2) of subdivision (a) during the 2003 portion of the 2003–04 Regular Session is required due to extraordinary circumstances. The Legislature finds that there have been unforeseen construction delays, contract award delays, and changed conditions

requiring design modifications for lining the All American Canal and the Coachella Branch of the All American Canal, and that these circumstances are extraordinary.

SEC. 2. Section 1 of Chapter 617 of the Statutes of 2002 is amended to read:

Section 1. (a) "Quantification Settlement Agreement" means the agreement, the provisions of which are substantially described in the draft Quantification Settlement Agreement (QSA), dated December 12, 2000, and submitted for public review by the Quantification Settlement Agreement parties, and as it may be amended, and that shall include as a necessary component the implementation of the Agreement for Transfer of Conserved Water by and between the Imperial Irrigation District and the San Diego County Water Authority, dated April 29, 1998 (IID/SDCWA Transfer Agreement), and as it may be amended, and any QSA-related program that delivers water at the intake of the Metropolitan Water District of Southern California's Colorado River Aqueduct.

(b) It is the intent of the Legislature to allocate fifty million dollars (\$50,000,000) from funds available pursuant to the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, if it is approved by the voters at the statewide general election to be held November 5, 2002 (Proposition 50), as a minimum state contribution or matching contribution for federal funds or funds obtained from other sources to prepare the restoration study, to assist in the implementation of the preferred alternative or other related restoration activities, including the program referred to in paragraph (3) of subdivision (d) of Section 2081.7 of the Fish and Game Code, at the Salton Sea or the lower Colorado River, or to assist in the development of a natural community conservation plan that is consistent with the initiative and that is implemented to effectuate the QSA.

(c) The Legislature finds that it is important to the state to meet its commitment to reduce its use of water from the Colorado River to 4.4 million acre-feet per year. The Legislature further finds that it is important that actions taken to reduce California's Colorado River water use are consistent with its commitment to restore the Salton Sea, which is an important resource for the state. The Legislature further finds that species previously designated as fully protected may be taken incidental to activities intended to meet the state's commitment to reduce its use of Colorado River water as long as those activities are found to comply with existing law, including Chapter 1.5 (commencing with Section 2050) of Division 3 of the Fish and Game Code.

(d) California's Colorado River Water Use Plan is a framework developed to allow California to meet its Colorado River needs from

within its basic annual apportionment. California will be required to reduce the amount of Colorado River water it uses by up to 800,000 acre-feet per year.

(e) California's basic apportionment of Colorado River water is 4.4 million acre-feet per year, but until recently, due to the availability of surplus river water and apportioned but unused water of Nevada and Arizona, California has used up to 5.2 million acre-feet per year over the past ten years. About 700,000 acre-feet of this additional water has been used to fill the Colorado River Aqueduct, which transports water to the southern California urban coast. Nevada and Arizona are now using, or are close to using, their full apportionments, and California can no longer rely on that surplus of water.

(f) The Salton Sea will eventually become too saline to support its fishery and fish-eating birds unless a restoration plan is adopted and implemented. The transfer of water from the Imperial Irrigation District to the San Diego County Water Authority and the other Quantification Settlement Agreement (QSA) parties pursuant to the QSA could result in an acceleration of the rate of salinization of the Salton Sea.

(g) Restoration of the Salton Sea is in the state and national interest. Congress recognized in the Salton Sea Reclamation Act of 1998, Public Law 105-372, that appropriate federal agencies should offer alternative restoration options to Congress and the public in order to avoid further deterioration of the internationally significant habitat and wildlife values of the Salton Sea and to protect the wide array of economic and social values that exist in the immediate vicinity of the Salton Sea. The failure to issue that report in a timely fashion has unnecessarily constrained the Legislature's ability to consider fully the costs and benefits of various options to restoration that should be undertaken at the Salton Sea.

SEC. 3. The Legislature hereby finds and declares that in order to resolve conflicts that have prevented the implementation of California's Colorado River Water Use Plan it is necessary to provide a mechanism to implement and allocate environmental mitigation responsibility between water agencies and the state for the implementation of the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, as follows:

(a) Notwithstanding any other provision of law, the Department of Fish and Game may enter into a joint powers agreement for the purpose of providing for the payment of costs for environmental mitigation requirements. The Director of the Department of Fish and Game or his or her designee shall chair the authority created by the joint powers agreement. The joint powers agreement shall include the following agencies:

(1) Coachella Valley Water District.

- (2) Imperial Irrigation District.
- (3) San Diego County Water Authority.

(b) Costs for environmental mitigation requirements shall be allocated based on an agreement among Imperial Irrigation District, the Coachella Valley Water District, the San Diego County Water Authority and the Department of Fish and Game and shall include the following:

(1) Costs up to, and not to exceed, one hundred thirty-three million dollars (\$133,000,000) shall be paid by the Imperial Irrigation District, the Coachella Valley Water District, and the San Diego County Water Authority for environmental mitigation requirements. Those costs may be paid to a joint powers authority established pursuant to this section. The amount of the obligation established in this paragraph shall be adjusted for inflation.

(2) Thirty million dollars (\$30,000,000) shall be paid by the Imperial Irrigation District, Coachella Valley Water District, and the San Diego County Water Authority to the Salton Sea Restoration Fund as provided in paragraph (6) of subdivision (c) of Section 2081.7 of the Fish and Game Code. This amount shall be adjusted for inflation.

(c) Except for the requirements of subdivision (c) of Section 2081.7 of the Fish and Game Code, subdivision (f) of Section 1013 of the Water Code, and the provisions of subdivision (b), no further funding obligations or in-kind contributions of any kind for restoration of the Salton Sea shall be required of the Imperial Irrigation District, the Coachella Valley Water District, the Metropolitan Water District of Southern California, and the San Diego County Water Authority, including federal cost-sharing or other federal requirements. Any future state actions to restore the Salton Sea will be the sole responsibility of the State of California.

(d) As used in this section, "environmental mitigation requirements" means any measures required as a result of any environmental review process for activities which are part of the project described in the final Environmental Impact Report/Environmental Impact Statement for the Imperial Irrigation District Water Conservation and transfer project certified by the Imperial Irrigation District on June 28, 2002, as modified and supplemented by the addendum thereto prepared to assess subsequent revisions to the Quantification Settlement Agreement, but excluding measures required to address environmental impacts:

(1) Within the service areas of the Coachella Valley Water District, other than impacts related to the Salton Sea, the San Diego County Water Authority, and the Metropolitan Water District of Southern California.

(2) Associated with the All American Canal and the Coachella Canal Lining Projects, and measures to address socioeconomic impacts.

(e) As used in this section, “environmental review process” means any of the following:

(1) The conducting of any required environmental review or assessment, or both.

(2) The obtaining of any permit, authorization, opinion, assessment or agreement.

(3) The study or design of any required mitigation pursuant to the California Environmental Quality Act, the National Environmental Protection Act, the Endangered Species Act, the California Endangered Species Act, the California Water Code, the public trust doctrine, or any other federal or California environmental resource protection law, or applicable federal or California regulations regarding their implementation.

(f) As used in this section, “environmental review process” does not include the Lower Colorado River Multi-Species Conservation Program established by the States of California, Arizona, and Nevada, as it may address impacts to the Colorado River.

SEC. 4. This act shall become operative only if SB 277 and SB 317 of the 2003–04 Regular Session are both chaptered and become effective on or before January 1, 2004.



EXHIBIT B
ENVIRONMENTAL COST SHARING AGREEMENT

**ENVIRONMENTAL COST SHARING, FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

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**ENVIRONMENTAL COST SHARING , FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

This Environmental Cost Sharing, Funding, and Habitat Conservation Plan Development Agreement ("Agreement") is entered into as of October 10, 2003 ("Agreement Date"), by and among the COACHELLA VALLEY WATER DISTRICT, a California county water district ("CVWD"); the IMPERIAL IRRIGATION DISTRICT, a California irrigation district ("IID"); and the SAN DIEGO COUNTY WATER AUTHORITY, a California county water authority ("SDCWA") (CVWD, IID, and SDCWA are sometimes referred to individually in this Agreement as "Party" and collectively as the "Parties").

RECITALS:

- A. IID, MWD and CVWD have entered into the Quantification Settlement Agreement dated as of October 10, 2003 (the "QSA").
- B. IID and SDCWA have executed an Agreement for Transfer of Conserved Water dated April 29, 1998, and various amendments thereto (collectively, the "1998 IID/SDCWA Transfer Agreement") subject to environmental review and other conditions, which describes certain proposed activities involving the conservation of water by IID and the transfer of the conserved water to SDCWA.
- C. IID and SDCWA have entered into an agreement dated January 27, 2000 to share certain costs related to the environmental review and compliance process and other state and federal approvals required to satisfy conditions necessary to implement the transactions described in the 1998 IID/SDCWA Transfer Agreement on the terms set forth therein (as the same may be amended from time to time, the "IID/SDCWA Cost Sharing Protocol).
- D. The State of California has enacted the QSA Legislation as defined in the QSA.
- E. The Parties and the State of California have executed the QSA-JPA as defined in the QSA, which provides, among other things, that Environmental Mitigation Costs for the IID water budget and certain IID transfers pursuant to the QSA and Related Agreements in excess of one hundred thirty-three million dollars (\$133,000,000) in Effective-Date Dollars shall be the exclusive responsibility of the State of California so as to ensure compliance with all federal and state environmental laws, including but not limited to the federal Endangered Species Act, federal Clean Air Act, and federal Clean Water Act.

NOW, THEREFORE, in consideration of the above recitals and the mutual promises set forth herein, the Parties hereby agree as follows:

**ARTICLE 1
DEFINITIONS**

1.1. Incorporated Definitions. The terms with initial capital letters that are used in this Agreement shall have the same meaning as set forth in Section 1.1 of the QSA, as of the Closing Date of the QSA, unless the context otherwise requires.

1.2. Additional Definitions. The following terms with initial capital letters shall have the meaning as set forth below.

(1) **Changed Circumstances.** Changes in circumstances affecting a species or the geographic area covered by the HCP that can reasonably be anticipated by the parties and that can reasonably be planned for in the HCP (e.g. a fire or other natural catastrophic event in areas prone to such event.) Changed Circumstances and the planned responses to those circumstances are described in the Draft HCP.

(2) **Class A Covered Species.** The species identified in Table 1.5-1 of the Draft HCP, but excluding the 25 species identified in Table 3.9-1 of the Draft HCP.

(3) **Class B Covered Species.** The species identified in Table 3.9-1 of the Draft HCP.

(4) **Costs.** All out of pocket costs reasonably incurred by a Party for a specified purpose pursuant to this Agreement, including, but not limited to, financing costs, costs of the Parties' staff, contractors, equipment, and real and personal property. The cost of real property shall be determined by its fair market value as defined in California Code of Civil Procedure §§ 1263.310 *et seq.*

(5) **Covered Activities.** Those activities described as Covered Activities in the Draft HCP.

(6) **Covered Species.** Class A Covered Species and Class B Covered Species.

(7) **Decision Date.** October 10, 2003.

(8) **Draft HCP.** The draft Habitat Conservation Plan dated June 2002 and included in the Final EIR/EIS for the IID Water Conservation and Transfer Project, as certified by the IID Board on June 28, 2002.

(9) **Environmental Litigation Costs.** All Costs reasonably incurred by any Party to defend any litigation involving transactions contemplated by the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement that challenges in whole or in part compliance with applicable environmental laws and regulations or any permit, appraisal, authorization, opinion, assessment or agreement pursuant to any other federal or any state resource protection law or applicable federal or state regulation implementing same.

(10) **Environmental Mitigation Costs.** All Costs reasonably incurred by any Party to satisfy the Environmental Mitigation Requirements. Reasonable attorneys' fees incurred for legal services related to the financing of environmental mitigation expenses shall be included as Mitigation Costs, but no other attorneys' fees incurred by any Party shall be included.

(11) **Environmental Mitigation Requirements.** Any measure required as a result of any Environmental Review Process for activities which are part of or in furtherance of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement or the

Project described in the Final EIR/EIS for the IID Water Conservation and Transfer Project, certified by IID on June 28, 2002, as modified and supplemented by the Addendum thereto dated September 2003, but still including the Draft HCP, the HCP Mitigation Requirements, the transfer of up to 145 KAF in the aggregate as an Interim Surplus Backfill as referenced in the IID/DWR Transfer Agreement, and including the arrangement for ensuring adequate funding to pay for all required measures, but excluding activities and Costs incurred to address:

- (i) Environmental impacts within the CVWD, and SDCWA service areas other than impacts related to the Salton Sea within the CVWD service area;
- (ii) Environmental impacts associated with the All-American Canal and the Coachella Canal lining projects;
- (iii) Environmental impacts associated with the Lower Colorado River, other than impacts that are attributable to the transfer of Conserved Water from IID to SDCWA pursuant to the 1998 IID/SDCWA Transfer Agreement; and
- (iv) Any socioeconomic impacts.

(12) **Environmental Review Costs.** All Costs, including attorneys' fees, reasonably incurred by any Party in connection with any Environmental Review Process. Environmental Review Costs incurred prior to the Agreement Date shall be governed by Section 3.1 and shall not be included in Environmental Mitigation Costs.

(13) **Environmental Review Process.** Any process:

- (i) To conduct environmental review and/or assessment required under CEQA, NEPA and applicable federal, state and agency regulations implementing those statutes;
- (ii) To obtain any permit, approval, authorization, opinion, assessment or agreement pursuant to the Endangered Species Act ("ESA"), the California Endangered Species Act ("CESA"), the Natural Community Conservation Planning Act ("NCCPA"), the state and federal air quality laws, the California Water Code, the public trust doctrine, or any other federal or state environmental resource protection law or applicable federal or state regulations implementing same; and/or
- (iii) To study and/or design any mitigation required to comply with CEQA, NEPA, ESA, CESA, NCCPA, the state and federal air quality laws, the California Water Code, or any other federal or state resource protection law or applicable federal or state regulations implementing same;
- (iv) But not the Lower Colorado River Multi-Species Conservation Program among the States of California, Arizona and Nevada.

(14) **Expected Environmental Mitigation Costs.** The estimated present value costs of satisfying the Environmental Mitigation Requirements, which are stated and described in Exhibit A, attached hereto.

(15) **Expected HCP Mitigation Costs.** That portion of the Expected Environmental Mitigation Costs attributable to the HCP Mitigation Requirements, such Costs being described in Exhibit A.

(16) **HCP Mitigation Requirements.** All Environmental Mitigation Requirements described in Exhibit B attached hereto, and any modified or additional mitigation requirements that may be created pursuant to the HCP described in Section 5 herein. HCP Mitigation Requirements include, but are not limited to, actions to avoid, reduce, minimize, mitigate, or compensate for impacts on Covered Species and their habitat, and also actions to enhance the survival or recovery of the Covered Species.

(17) **Parties' Funds.** Funds required to be provided by the Parties to the QSA-JPA for Environmental Mitigation Requirements in the amounts set forth on Exhibit E.

(18) **Permits.** Collectively, incidental take permits issued by the U.S. Fish and Wildlife Service pursuant to 16 U.S.C. Section 1539(a)(1)(B) and by the California Department of Fish and Game pursuant to Fish and Game Code Sections 2081 and 2835.

(19) **Permit Effective Date.** The date the Permits take effect under applicable laws and regulations.

(20) **Remaining Environmental Mitigation Costs.** Environmental Mitigation Costs in excess of such Costs paid by the Parties' Funds.

(21) **Resource Approval Requirements.** The respective actions and responsibilities of the Parties, as lead agency or otherwise, undertaken in connection with the Resource Approvals contemplated by Section 6.2(2)(ii) of the QSA.

(22) **Review Requirements.** The Environmental Review and assessments undertaken by the respective Parties, as lead agency or otherwise.

(23) **State Obligation.** The amount, if any, of the Environmental Mitigation Costs required to be paid by the State of California pursuant to the QSA-JPA. The Parties understand the State Obligation to be an unconditional contractual obligation of the State of California not dependent on any further State action, and are relying on the State Obligation in order to comply with the extensive state and federal requirements that mandate Environmental Mitigation Requirements. In addition, the Parties are relying on the State Obligation in making contracts with third parties, including without limitation, landowners and farmers in the Imperial Valley who will be entering contracts to produce conserved water.

(24) **State Loan Guarantee.** A binding commitment by the California Infrastructure & Economic Development Bank to unconditionally guarantee the repayment in full of any outstanding debt incurred by the IID to fund capital improvements for the creation of Conserved Water provided for under the QSA and its Related Agreements, in an amount not to exceed One Hundred Fifty Million Dollars (\$150,000,000) in 2003 dollars, in the event that the QSA term ends prior to Year 45 of the QSA or, in lieu of an unconditional guarantee, a reasonable economic equivalent. Such guarantee shall be without any rights of recourse, subrogation, reimbursement, contribution or indemnity against the IID.

(25) **Unexpected Environmental Mitigation Costs.** Any Costs required for satisfaction of Environmental Mitigation Requirements that exceed Expected Environmental Mitigation Costs.

(26) **Unexpected HCP Mitigation Costs.** Any Costs required for satisfaction of HCP Mitigation Requirements that exceed Expected HCP Mitigation Costs.

(27) **Unforeseen Circumstances.** Changes in circumstances affecting a species or geographic area covered by the HCP that could not reasonably have been anticipated by IID at the time of the preparation of the Draft HCP.

(28) **Wildlife Agencies.** Collectively, the U.S. Fish and Wildlife Service ("USFWS") and the California Department of Fish and Game ("CDFG").

1.3. Rules of Construction and Word Usage. Unless the context clearly requires otherwise:

(1) The Recitals to this Agreement are a part of this Agreement to the same extent as the Articles;

(2) The Exhibits attached to this Agreement are incorporated by reference and are to be considered part of the terms of this Agreement;

(3) The plural and singular numbers include the other;

(4) The masculine, feminine, and neuter genders include the others;

(5) "Shall," "will," "must," and "agrees" are each mandatory;

(6) "May" is permissive;

(7) "May not" is prohibitory;

(8) "Or" is not exclusive;

(9) "Includes" and "including" are not limiting;

(10) "Between" includes the ends of the identified range; and

(11) "Person" includes any natural person or legal entity.

ARTICLE 2 ENVIRONMENTAL MITIGATION MANAGEMENT

2.1. Ongoing Review Requirements. The Parties will cooperate and consult with one another with a view to assuring the timely and proper completion of all environmental reviews and assessments.

2.2. Ongoing Resource Approval Requirements.

(1) **Primary Responsibility.** After the Agreement Date, each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to any resource approval shall obtain the prior consent of the other Parties (which consent may not be unreasonably withheld) before entering into a binding agreement with any person, including a Party, which contains terms and conditions pertaining to such approval requiring the incurrence of significant Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely acquisition of all resource approvals.

2.3. Mitigation Implementation Measures.

(1) **Primary Responsibility.** Each Party serving as a lead agency, co-lead agency, applicant, petitioner or otherwise in a position of authority and responsibility with respect to the acquisition, construction or carrying out of Environmental Mitigation Requirements that will result in Environmental Mitigation Costs that will be funded or reimbursed pursuant to this Agreement shall exercise due care and prudence in the making of any decision and the performance of any activity relating to such measures.

(2) **Cooperation and Consultation.** The Parties will cooperate and consult with one another, as appropriate, with a view to assuring the timely and proper implementation of all Environmental Mitigation Requirements described in Section 2.3(1) at a reasonable cost consistent with the Parties' interests in minimizing their respective obligations under this Agreement and the public interest.

ARTICLE 3 ENVIRONMENTAL REVIEW AND LITIGATION COSTS

3.1. Environmental Review Costs. Within thirty (30) days after the Agreement Date, CVWD shall pay IID Two Hundred Thousand Dollars (\$200,000). Except for the foregoing, and except as otherwise provided for in this Agreement or as a Party and one or more of the other Parties may otherwise agree under the IID/SDCWA Cost Sharing Protocol or under any other cost sharing protocol or similar written arrangement, each Party shall bear its own Environmental Review Costs incurred prior to or after the Effective Date.

3.2. Environmental Litigation Costs. It is contemplated that the Parties will join in the defense of any environmental litigation pertaining to the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement. Each Party shall bear its own Environmental Litigation Costs incurred in connection with any such defense, except as such Party may otherwise agree pursuant to a joint defense agreement between or among one or more of the other Parties pertaining to any such defense and specifying the respective responsibilities of the parties to such agreement, including any cost-sharing with respect thereto.

3.3. Federal Agency Reimbursement Claims. If BOR, the USFWS, or any other federal agency request the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

3.4. California Agency Reimbursement Claims. If the CDFG, or any other California State agency, requests the Parties to reimburse it for any of its costs in consulting, participating in, or conducting an environmental assessment, or any part thereof, with respect to the Review Requirements, or Resource Approval Requirements, and if the Parties agree to the request, then the Parties will share and pay such requested reimbursement as follows: thirty-three percent (33%) by IID, thirty-three percent (33%) by CVWD, and thirty-three percent (33%) by SDCWA. Each Party shall pay its share of any such requested reimbursement directly to the requesting agency and shall notify the other Parties of the date and amount of such payment. This Section shall not apply to reimbursement requests arising out of: (i) environmental impacts within the CVWD (other than Pupfish Conservation Measures 1, 2, and 3 outlined in the December 18, 2002 Biological Opinion issued by the USFWS) and SDCWA service areas; (ii) environmental impacts associated with the All-American Canal and the Coachella Canal lining projects; (iii) environmental impacts associated with the Lower Colorado River; and (iv) any socioeconomic impacts.

ARTICLE 4 ENVIRONMENTAL MITIGATION COSTS

4.1. Allocation of Environmental Mitigation Costs.

(1) **In General.** Environmental Mitigation Costs shall be paid to the QSA-JPA from the Parties' Funds in the amounts set forth in Exhibit D and on the schedules attached as exhibits to the QSA-JPA.

(2) **IID Contribution.** IID's total payments of Environmental Mitigation Costs shall not exceed Thirty Million Dollars (\$30,000,000), as described in the 1998 IID/SDCWA Transfer Agreement, as amended as of the Closing Date of the QSA, and paid on the schedule attached to the QSA-JPA. IID shall also pay to the QSA-JPA the Settlement and Efficiency Opportunity Payment as required pursuant to the 1998 IID/SDCWA Transfer Agreement and IID/CVWD Acquisition Agreement on the schedule attached to the QSA-JPA.

(3) **Conditions Precedent.** As of the Closing Date, a binding commitment for the State Loan Guarantee in a form acceptable to the IID, and a binding commitment for the State Obligations in a form acceptable to the Parties shall have been obtained.

4.2. Payment of Unexpected and Remaining Environmental Mitigation Costs.

(1) **Unexpected Environmental Mitigation Costs.** Unexpected Environmental Mitigation Costs shall first be paid from any available Parties' Funds, and then from the State Obligation.

(2) **Remaining Environmental Mitigation Costs.** In the event that the State determines that the costs of Remaining Environmental Mitigation Costs during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement under this Section 4.2(2) would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by the Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected, Unexpected or Remaining Unexpected Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

4.3. Payment and Reimbursement of Environmental Mitigation Costs, as Incurred.

(1) **In General.** Each Party will maintain proper accounting records detailing the Environmental Mitigation Costs paid by it to the QSA-JPA. Except as may otherwise be agreed by the Parties, indirect costs shall not be counted as incurred costs. For purposes of this Agreement, “indirect costs” include, but are not limited to, overhead costs, losses of revenue from any source and other opportunity costs of any kind.

(2) **Quantification of Incurred Costs.** Each Party will provide to the other Parties within 30 days after the end of each calendar quarter a detailed report setting forth the Environmental Mitigation Costs paid by it during such quarter. The form of such report will be as agreed from time to time by the Parties. Each such report will be subject to audit and verification by any Party, at that Party’s expense.

(3) **Costs In the Event of Termination.** If the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement are terminated, the obligation of the Parties’ Funds and of the State to pay for Environmental Mitigation Costs and Remaining Environmental Mitigation Costs attributable to the impacts caused by the Conserved Water transferred or acquired during the term of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement shall continue as long as Environmental Mitigation is necessary to mitigate any continuing impacts that last beyond termination.

(4) In the event that the State determines that the costs of Remaining Environmental Mitigation Costs after termination of the 1998 IID/SDCWA Transfer Agreement and/or the IID/CVWD Acquisition Agreement under this Section 4.3(4) would be reduced if modification were made to IID’s operations or to the operations of a farmer within IID’s service area, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by Wildlife Agencies and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Remaining Mitigation Costs;

(v) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of

different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vi) If the modification involves terminating or reducing the operation of a capital project, the affected owner/operator (IID or a farmer) can reasonably return to operations or farming as it existed prior to the installation of the capital project.

In the event that the State determines that the costs referred to in the preceding paragraph could be reduced through modification of the operations of a farmer within the IID service area, the State shall notify IID of the estimated amount of such reduction in costs and shall request that IID request that the farmer take such action and/or modify operations so as to reduce said costs. IID shall thereupon determine whether the requested modification meets the requirements of subparagraphs (i) through (vi) of the preceding paragraph and if it does, shall request that the farmer undertake such modifications. If the farmer fails to undertake such modifications, the State shall not be obligated to pay any such costs to the extent that the requirement for such mitigation could be avoided or reduced by the requested changes.

ARTICLE 5 HABITAT CONSERVATION PLAN

5.1. Approval of HCP. Commencing with the Agreement Date, SDCWA and CVWD, in consultation and collaboration with IID, shall use their best efforts to cause the USFWS and the CDFG to approve, prior to December 31, 2006, a habitat conservation plan/natural community conservation plan ("HCP") and related Permits which satisfy all of the standards and criteria described in Section 5.2. The obligation to utilize such best efforts shall continue except to the extent that coverage of a species is deemed infeasible pursuant to Section 5.4 below. "Best efforts" means the prudent, diligent and good-faith efforts of SDCWA and CVWD to secure the HCP and related Permits as a fiduciary for the benefit of IID, but shall not require the expenditure by SDCWA and CVWD together of more than Five Million Dollars (\$5,000,000) in 2002 dollars to fund third-party consultants tasked with developing the HCP. CVWD shall not be required to commit its staff and in-house resources in excess of two qualified employee equivalents.

5.2. HCP Standards and Criteria. The HCP and the Permits shall:

- (1) Comply with all applicable requirements of the ESA, CESA and Natural Community Conservation Planning Act;
- (2) Provide IID with the authority to implement the Covered Activities in compliance with ESA and CESA;
- (3) Provide IID with the authority to take the Covered Species incidental to the Covered Activities pursuant to ESA and CESA. Such take authority shall become effective no later than (i) the Permit Effective Date with regard to any Covered Species that is listed as an endangered species or threatened species under ESA as of the Permit Effective Date, (ii) the Permit Effective Date with regard to any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA as of the Permit Effective Date, (iii) immediately upon the listing (and without further action or approval by USFWS) of any other

Covered Species as a threatened species or endangered species pursuant to ESA after the Permit Effective Date, and (iv) immediately upon the listing (and without any further approval action or approval by CDFG) of any Covered Species that is listed as a candidate species, threatened species or endangered species pursuant to CESA after the Permit Effective Date;

(4) Have a term of years not less than forty-five (45) years from the Permit Effective Date, except that coverage for the white pelican, black skimmer, and double-crested cormorant may be limited to a term of fifteen (15) years from the Permit Effective Date;

(5) Not impose on IID, or otherwise require IID to fund, support or implement, any Environmental Mitigation Requirements other than the HCP Mitigation Requirements described on Exhibit A. In no event shall IID be obligated to pay for any Costs of complying with or implementing the HCP or complying with the Permits, in excess of Section 4.1(2) or other limitation on IID's obligation to pay for mitigation costs.

(6) Include an Implementation Agreement among IID and the Wildlife Agencies that describes the rights and obligations of IID and the Wildlife Agencies with regard to the implementation of the HCP. The Implementation Agreement shall, at a minimum, include the following covenants in a form that is valid, binding and enforceable by IID:

(i) In the event of Unforeseen Circumstances, USFWS and CDFG will not require from IID the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources with regard to the impacts of the Covered Activities on the Covered Species;

(ii) Except for the HCP Mitigation Requirements described on Exhibit A, no limitations or restrictions shall be imposed on IID, either directly or indirectly, by USFWS or CDFG with regard to the impacts of the Covered Activities on the Covered Species or with regard to the impacts on the Covered Species attributable to Changed Circumstances;

(iii) USFWS shall agree that the Section 10(a) Permit shall constitute a Special Purpose Permit under 50 CFR section 21.27, for the take of all Covered Species identified at 50 CFR section 10.13, excluding bald eagles which are listed under ESA as of the Effective Date. The Special Purpose Permit shall be valid for a period of three (3) years from its Effective Date, provided the Section 10(a) Permit remains in effect for such period. The Special Purpose Permit shall be renewed, provided the IID remains in compliance with the terms of the Implementation Agreement and the Section 10(a) Permit. Each such renewal shall be valid for a period of three years, provided that the Section 10(a) Permit remains in effect for such period. USFWS will not refer the incidental take of any bald eagle, *Haliaeetus leucocephalus*, for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the Mitigation Requirements;

(iv) In any consultation that may be required or processed pursuant to Section 7 of ESA (16 U.S.C. section 1536(a)) with regard to the Covered Activities

analyzed in the ESA intra-Service Section 7 consultation for the HCP, the USFWS shall, to the maximum extent appropriate and permitted by law, rely upon, and utilize, the ESA biological opinion completed with regard to analysis of the HCP and, if appropriate, programmatic Section 7 opinions governing Covered Species;

(v) In the event that a critical habitat determination is made for any Covered Species, no additional Mitigation shall be required of IID that is in addition to the Mitigation Requirements; and.

(vi) Neither USFWS or CDFG shall suspend or revoke any of the Permits without first conducting a formal adjudicatory hearing substantially in accordance with the procedures applicable to hearings conducted pursuant to Sections 554-556 of the federal Administrative Procedure Act to the extent permitted by applicable law.

(7) Be authorized by complete and final environmental documentation pursuant to CEQA and NEPA.

5.3. Exceptions. Notwithstanding the provisions of Sections 5.1 and 5.2, above, SDCWA and CVWD shall not be required to provide coverage under the HCP for certain Covered Species if such coverage is deemed infeasible. Coverage shall be deemed infeasible under the following circumstances:

(1) As to Class B Covered Species, if, as of June 1, 2005, despite the best efforts of SDCWA and CVWD (i) the Wildlife Agencies determine (by final agency action) that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the Expected HCP Mitigation Costs;

(2) As to Class A Covered Species, SDCWA and CVWD shall have utilized their continuous best efforts until December 31, 2005, to obtain coverage for such species, but (i) the Wildlife Agencies have determined (by final agency action) as of December 31, 2006, that coverage of a species or the provisions of coverage of a species is prohibited by ESA or CESA, or (ii) SDCWA and CVWD reasonably determine that the Cost of such coverage or the provisions of such coverage, when combined with all other Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), will exceed the total amount of Expected HCP Mitigation Costs described in Exhibit A. In the event that IID is relieved of all obligations under applicable law and regulation to undertake some portion of the HCP Mitigation Requirements described in Exhibit B, the amount of Expected HCP Mitigation Costs for purposes of this Section 5.3 shall be adjusted to reflect any change in said requirements.

5.4. Revival of Efforts. In the event that coverage of a Class A or Class B Covered Species is deemed infeasible as of December 31, 2006, and June 1, 2005, respectively, pursuant to subsection 5.3(i) and (ii) above, and if new information becomes available which indicates

that approval of coverage of that species by the Wildlife Agencies is feasible and within the budget of Expected HCP Mitigation Costs (as adjusted to reflect any then-identifiable actual Costs or updated estimates), SDCWA and CVWD shall revive their best efforts to obtain coverage for that species.

5.5. Modifications to IID Operations. In the event that SDCWA and CVWD determine that the cost of satisfying the requirements of subsections 5.1 and 5.2, above, would be reduced if modifications were made to IID's operations, then IID shall make such modifications, provided that, with respect to each such modification:

(i) IID has approved the modification, which approval shall not be unreasonably withheld;

(ii) The modification has been approved by USFWS and CDFG and all governmental permits and approvals required to implement the modification have been obtained;

(iii) The modification is capable of reasonable implementation in compliance with all applicable laws;

(iv) The cost of such modification, including, but not limited to, the cost of processing any required governmental permits and approvals, the cost of processing any necessary environmental review, and the cost of implementing any mitigation measures required as a result of environmental review or any governmental permit or approval, shall be deemed included in Expected HCP Mitigation Costs;

(v) The modification does not require a change in operations by any individual farmer(s);

(vi) The modification does not require any new fallowing, or the continuation of any existing fallowing, or any request for water deliveries, or the use of different crops, different acreage, a different amount of acreage or different farming methods, or the like; and

(vii) If the modification involves terminating or reducing the operation of a capital project, then the affected owner/operator (IID or a farmer) has reasonably determined that the termination/reduction will not adversely affect its operations or farming, compared to conditions prior to the termination/reduction of operations.

5.6. Breach of Agreement. Any failure of the IID, SDCWA or CVWD to satisfy its respective obligations described in this Article 5 shall constitute a material breach of this Agreement. The Parties shall utilize the procedures of Sections 7.1 and 7.3 to resolve any dispute regarding the existence of a material breach under this Section.

5.7. Compliance with Laws. IID shall have the right, at any time during the term of the 1998 IID/SDCWA Transfer Agreement and the IID/CVWD Acquisition Agreement, to cease any activity if IID, acting in good faith and after receiving a written notification or warning, determines that continuation of such activity will: (i) violate ESA, CESA, any regulations or

orders promulgated pursuant thereto, the terms and conditions of any ESA or CESA permit, approval or agreement; or (ii) otherwise violate applicable state, federal or local laws, ordinances or regulations, unless IID is immune from such liability pursuant to statute. Prior to making such determination, if circumstances permit, IID shall consult with the other Parties to this Agreement and with the Wildlife Agencies, and other agency with the authority to enforce the statute, regulation, permit, order or approval that is the subject of the proposed IID determination. IID shall not cease the activity if the agency with jurisdiction to enforce the applicable statute, regulation, permit, order or approval, provides IID with adequate assurances, in writing, that the continuation of the activity will not violate the applicable statute, regulation, permit, order or approval. IID must utilize a substitute activity for the ceased activity, if such substitute is environmentally, physically and economically available. Any additional costs for the substitute activity shall be treated as an Unexpected HCP Mitigation Cost.

ARTICLE 6 CONTRACT ADMINISTRATION

6.1. Contract Managers.

(1) **Designation of Contract Managers.** In order to facilitate and implement this Agreement, the contract manager designated by each Party herein shall be responsible for managing and implementing that Party's performance hereunder. Any Party may change its designated contract manager at any time by prior written notice to the other Parties. The initial contract managers are:

For CVWD: Steve Robbins

For IID: Tina A. Shields

For SDCWA: Larry Purcell

(2) **Communications.** All correspondence, notices or other matters related to this Agreement, including payments, shall be directed to the appropriate contract manager designated above.

(3) **Administrative Protocols.** The contract managers will develop and amend from time to time written administrative protocols, subject in each case to the approval of the Parties or their delegates.

ARTICLE 7 DISPUTES

7.1. Disputes Among or Between the Parties. The Parties or their delegates shall seek to resolve any dispute concerning the interpretation or implementation of this Agreement through negotiation involving, as and when appropriate, the general manager or chief executive officer of each of the Parties. Any unresolved dispute among or between CVWD, IID and/or SDCWA under Articles 4 and 5 of this Agreement shall be resolved pursuant to Section 7.3. Any other unresolved dispute among or between Parties under this Agreement shall be resolved

by litigation pursuant to Section 7.2. The Parties consent to suit in Federal court to enforce the terms of this Agreement.

7.2. Action or Proceeding Between the Parties. Each Party acknowledges that it is a "local agency" within the meaning of § 394(c) of the California Code of Civil Procedure ("CCP"). Each Party further acknowledges that any action or proceeding commenced by one Party against the other would, under § 394(a) of the CCP, as a matter of law be subject to being transferred to a "Neutral County," or instead, having a disinterested judge from a Neutral County assigned by the Chairman of the Judicial Council to hear the action or proceeding. Each party therefore:

- (1) Stipulates to the action or proceeding being transferred to a Neutral County or to having a disinterested judge from a Neutral County assigned to hear the action or proceeding;
- (2) Waives the usual notice required under the law-and-motion provisions of Rule 317 of the California Rules of Court;
- (3) Consents to having any motion under § 394(c) heard with notice as an ex parte matter under Rule 379 of the California Rules of Court; and
- (4) Acknowledges that this Agreement, and in particular this section, may be submitted to the court as part of the moving papers.

Nothing in this section, however, impairs or limits the ability of a Party to contest the suitability of any particular county to serve as a Neutral County.

7.3. Resolution of Arbitration Disputes. Disputes among or between Parties under Articles 4 and 5 of this Agreement shall be resolved pursuant to the provisions of this Article.

(1) Any dispute which cannot be resolved by consensual agreement shall be resolved through binding arbitration by a panel of arbitrators in an arbitration proceeding conducted in a Neutral County, or such other location as the Parties may agree. Arbitration proceedings may be initiated by any Party sending a demand for arbitration to the other Parties in conformance with the Notice provisions of this Agreement. The Parties shall impanel a group of three (3) arbitrators by each selecting an arbitrator of its choice who shall then select the third (3rd) member of the panel. At least one of the arbitrators must be a person who has actively engaged in the practice of law with expertise deciding disputes and interpreting contracts. Prior to the commencement of proceedings, the appointed arbitrators will take an oath of impartiality. The Parties shall use their reasonable best efforts to have the arbitration proceeding concluded within ninety (90) Business Days.

(2) In rendering their determination, the arbitrators shall determine the rights and obligations of the Parties according to the substantive and procedural laws of California. All discovery shall be governed by the CCP with all applicable time periods for notice and scheduling provided therein being reduced by one-half (½). The arbitrators may establish other discovery limitations or rules. The arbitration process will otherwise be governed by the Commercial Arbitration Rules of the American Arbitration Association. All issues regarding

compliance with discovery requests shall be decided by the arbitrators. A decision by two (2) of three (3) arbitrators will be deemed the arbitration decision. The arbitration decision shall be in writing and shall specify the factual and legal bases for the decision. The decision of such arbitrators shall be final and binding upon the parties, and judgment upon the decision rendered by the arbitration may be entered in the Neutral County superior court.

(3) The costs (including, but not limited to, reasonable fees and expenses of counsel and expert or consultant fees and costs), incurred in an arbitration (including the costs to enforce or preserve the decision) shall be borne by the Party(ies) against whom the decision is rendered. If the decision is not clearly against one Party on one or more issues, each Party shall bear its own costs. The arbitration decision shall identify whether any Party shall be responsible for the costs of the other Party(ies).

ARTICLE 8 GENERAL PROVISIONS

8.1. Term. This Agreement shall commence as of the Closing Date and shall terminate on the Termination Date, except that the requirements of Section 4.3(5) shall survive the Termination Date.

8.2. Amendment. This Agreement may be amended only by a written instrument signed by the IID, SDCWA and CVWD.

8.3. Attorneys' Fees. If any Party commences a legal proceeding for any relief against any other Party to this Agreement arising out of this Agreement, the losing Party shall pay the prevailing Party's legal costs and expenses, including, but not limited to, reasonable attorneys' fees and court costs, except as may otherwise be specified in the decision or order entered in said proceeding.

8.4. Authority. Each Party represents and warrants that: (i) it has the requisite power and authority to enter into and perform its obligations under this Agreement; (ii) the individuals executing this Agreement on its behalf are the duly authorized agents of such Party and are authorized to do so under the Party's governing documents; and (iii) the terms of this Agreement are binding upon and enforceable against such Party in accordance with its terms.

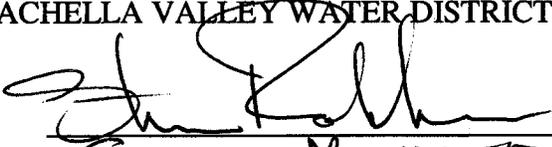
8.5. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but both of which, taken together, shall constitute one and the same Agreement after each party has signed such a counterpart.

8.6. Effective Date. This Agreement shall be effective on the Effective Date of the QSA.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the Date first written above.

"CVWD"

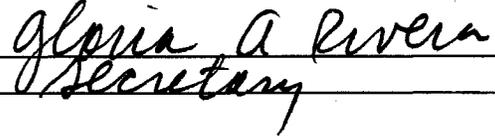
COACHELLA VALLEY WATER DISTRICT

By: 
Title: GENERAL MANAGER

"IID"

IMPERIAL IRRIGATION DISTRICT

By: 
Title: President

By: 
Title: Secretary

"SDCWA"

SAN DIEGO COUNTY WATER AUTHORITY

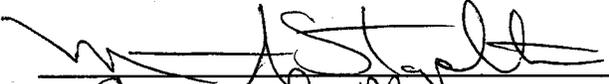
By: 
Title: General Manager

EXHIBIT A

EXHIBIT A

General Notes

1. Except as noted, all costs are in year 2002 dollars. Future costs have been discounted 3% for present value estimates.
2. Costs for each measure include 3 phases: 1) design/permitting, 2) implementation/construction, and 3) operations & maintenance for the 45 year project period.
3. Costs for each measure are dependent on the specific timing and duration for each phase. Phases were initiated when necessary to provide offsets for expected impacts.
4. Stabilization of the receding Salton Sea shoreline utilizes gravel cover. Costs for alternative measures could vary substantially.
5. No costs are included for any unknown future mitigation measures that might arise from required studies.
6. No specific sites for habitat creation measures have been identified. Costs are planning estimates only and may change depending upon location, local economic conditions, final design, etc.
7. No additional commitment of land, water or other resources is required for adaptive management.
8. Attempts have been made to eliminate duplication of costs among measures.
9. Supporting documentation for each cost estimate is available at CVWD, IID, MWD, and SDCWA.

Estimated HCP Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost Items.
General - 1	Hire full-time biologist to manage HCP and participate on HCP Implementation Team.	3,678	First year O&M \$150,000. Begins in 2003.
General - 2	Convene and facilitate HCP IT.	270	Reimbursement for CDFG and USFWS participation on HCP IT. IID biologist participation addressed in General-1. Begins in 2003.
Salton Sea - 2	Pupfish refugium pond.	340	Pond creation to be implemented at end of 15 Year Minimization Plan.
Salton Sea - 3	Tamarisk scrub habitat surveys and creation.	11,132	Surveys and habitat replacement to begin at end of 15 Year Minimization Plan. Maximum creation assumes 1321 acres.
Tree Habitat - 1	Tree habitat surveys and creation.	751	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 34.1 acres.

Tree Habitat - 2	Seepage community surveys and creation.	644	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 30 acres.
Tree Habitat - 3	Site surveys for construction scheduling.	7	Surveys to begin at start of efficiency conservation in 2008.
Drain Habitat - 1	Creation of managed marsh habitat.	23,682	73 acres to be implemented in 2003, 117 acres to be implemented at start of efficiency conservation period in 2008, plus the balance of 462 acres to be constructed starting in 2017. The maximum total acreage is 652. Water to sustain marsh is included at 12AF/acre/year with 50% from existing drainage and 50% from purchased irrigation water. Irrigation water assumed at \$16/AF. Redundant with SWRCB order.
Drain Habitat - 2	Avoid dredging river deltas between Feb.15 and Aug. 31.	0	No additional costs assumed for scheduling of maintenance dredging.
Drain Habitat - 3	Site surveys to avoid construction disturbance of covered species.	0	No additional costs assumed for crews to survey areas for wildlife prior to beginning work.
Desert Habitat - 1	Worker education program - training and materials.	37	Begins in 2003.

Desert Habitat - 2	Precautions for workers during O&M of canals and drains.	38	Begins in 2003.
Desert Habitat - 3	Habitat surveys, construction monitoring, and vegetation restoration.	436	Begins in 2003.
Desert Habitat - 4	Habitat surveys and update worker manual.	476	Habitat surveys and worker training manual to begin in 2003.
Desert Habitat - 5	Desert habitat acquisition and management.	118	Habitat acquisition and management to begin at start of efficiency conservation in 2008. Maximum acquisition assumes 100 acres.
Owl - 1	Worker education program for canal and drain maintenance.	60	Begins in 2003. Some possible redundancy with Desert Habitat-1.
Owl - 2	Visual inspection of banks. Mark burrows. Develop standard operating procedures.	920	Operating procedures develop in 2006. Habitat protection measures begin at start of efficiency conservation period in 2008.
Owl - 3	Precautions for grading of spoils near canals and ditches.	0	No additional cost assumed for taking precautions during grading of spoils.
Owl - 4	Avoid disturbing burrows. Fill burrows to maintain channel.	2,014	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 5	Manage location and schedule of facility construction.	60	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 6	Maintain current techniques for canal and drain maintenance.	0	No additional cost assumed to maintain current techniques.
Owl - 7	Owl abundance, distribution, and demographic surveys.	532	Begins in 2003.

Agriculture - 1	Install markers on tailwater pump power lines.	40	Marker installation begins at start of efficiency conservation period in 2008.
Agriculture - 2	Plant and maintain cover crops or ridge till lands to conserve water.	360	Begins in 2003.
Other Species - 1	Implement species surveys and submit study program.	738	Begins in 2003.
Other Species - 2	Implement impact avoidance and minimization measures.	817	Begins in 2004.
Monitoring and Adaptive Management	Monitoring and adaptive management described in Chapter 4 of draft HCP.	0	Costs included in individual measures listed above are assumed to cover adaptive management.
TOTAL HCP		60,857	

Estimated 2002 Biological Opinion Portion of HCP Costs

Condition No	Mitigation Measure	Present Value in Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost Items.
15 Year Minimization Plan	Acquire and discharge water to the Salton Sea.	50,000	Water to avoid material change in Salton Sea elevation and salinity for 15 years. Redundant with SWRCB order.
Pupfish CM 2	Pupfish selenium toxicity study. Pupfish and selenium monitoring. Develop mitigation. Study of sources and management of selenium.	939	Begins in 2003. Includes selenium studies required by SWRCB.
Willow Flycatcher CM 1	Willow flycatcher breeding habitat evaluation.	228	Habitat surveys to begin at start of efficiency conservation period in 2008.
Willow Flycatcher CM 2	Habitat monitoring and replacement.	733	Habitat monitoring and replacement to begin at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 3	Long-term monitoring plan.	24	Management plan developed at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 4	Willow flycatcher take evaluation.	0	Addressed by Willow Flycatcher CM 1.
Brown Pelican CM 2	Roost site creation and monitoring.	1,175	No Year 1 capital cost; habitat creation to be implemented in 2009.
TOTAL 2002 BO		53,099	

Estimated CEQA Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost items.
Water Quality			
WQ-2	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-4	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-5	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-7	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
QSA-WR-1	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
Water Quality Subtotal		0	

Agricultural Resources			
AR-1	Prohibit use of non-rotational fallowing. Otherwise, no mitigation measures.	0	No costs for prohibiting use of non-rotational fallowing.
QSA-AR-1	Non-fallowing conservation measures or short term fallowing.	0	Addressed by measure AR-1.
SWRCB-HCP-AR-2	Conversion of up to 700 acres of prime farmland to create habitat.	0	Mitigation determined infeasible. Significant and unavoidable impact.
SWRCB-AR-1	Reclassify up to 50,000 acres of prime farmland or farmland of statewide importance.	0	Addressed by AR-1.
Agricultural Resources Subtotal		0	
Recreation			
R-7	Temporary and permanent relocation of boat launch facilities.	1,600	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 8 boat launch facilities relocated every 3 years through 2040 as necessary.
R-10	Temporary and permanent relocation of camping facilities.	2,889	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 88 campsites relocated every 6 years through 2040 as necessary.
QSA-RR-3	Relocation of Salton Sea recreation facilities or use of Conserved Water.	0	Addressed by measures R-7 and R-10.
SWRCB-R-7	Temporary and permanent relocation of boat launching facilities.	0	Addressed by R-7.
SWRCB-R-8	Reduced sportfishing opportunities.	0	Addressed by 15 Year Minimization Plan.

SWRCB-R-9	Implement SSHCS to avoid salinity impacts.	0	Addressed by 15 Year Minimization Plan and Salton Sea 2.
SWRCB-R-10	Temporary and permanent relocation of campgrounds and ancillary facilities.	0	Addressed by R-10.
Recreation Subtotal		4,489	

Air Quality			
AQ-2	Minimize PM10 emissions during construction and operation of efficiency conservation measures.	1,650	Begins in 2008. Redundant with SWRCB order.
AQ-3	Minimize PM10 emissions during fallowing through conservation measures, soil stabilization, etc.	14,895	Cost includes first year fallowing of 2,500 acres. Begins in 2003.
AQ-4	General conformity determination.	12	Begins in 2008.
AQ-7	Access restriction, research, monitoring. Obtain emission offsets and [or] direct emission reductions at the Sea.	36,774	Monitoring and research begins in 2008. Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan, and be implemented continuously for 20 years.
EJ-2	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
EJ-3	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
QSA-AQ-1	Construction SOPs and agricultural BMPs for dust control.	0	SOPs addressed in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-2	Construction BMPs for NOx, fugitive dust.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-3	Fugitive dust from decline in Salton Sea levels.	0	Addressed by AQ-7.
SWRCB-AQ-3	Dust control measures.	0	Addressed by AQ-3.

SWRCB-AQ-7	Access restriction, research, monitoring. Obtain emission offsets and direct emission reductions at the Sea.	0	Addressed by AQ-7.
Air Quality Subtotal		53,331	
Cultural Resources			
CR-1	Cultural resource surveys prior to construction of water conservation measures.	31	Surveys to begin in 2003. Assumes preconstruction surveys for 100 sites over a 15 year period with 5 sites requiring testing and recovery.
CR-2	Protect cultural resources during construction and operation.	0	Addressed by CR-1.
CR-5	Protect cultural resources during reduced flow to Salton Sea. Conduct archaeological surveys.	87	Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan.
ITA-1	Control of public access on exposed tribal lands.	0	Addressed by CR-5.
QSA-CR-3	Cultural Resource Surveys.	0	Addressed by CR-5.
Cultural Resources Subtotal		118	

Noise			
N-1	Permanent or temporary sound barriers for construction noise sources.	13	Barriers constructed at start of efficiency conservation period in 2008.
N-2	Permanent sound barriers for pumps in noise-sensitive areas.	15	Barriers constructed at start of efficiency conservation period in 2008.
N-3	Permanent sound barriers for interceptor pumps in noise-sensitive areas.	3	Barriers constructed at start of efficiency conservation period in 2008.
N-4	Permanent or temporary sound barriers for noisy equipment.	0	Addressed by N-1 through N-3.
QSA-N-1	Construction BMPs, sound barriers.	0	Addressed by N-1.
	Noise Subtotal	31	

Geologic Resources			
QSA-GSM-1	Minimize soil erosion through watering, paving, limiting vehicle speeds, crusting agents, and construction monitoring.	1,999	Includes storm water planning and related BMPs. PM10 dust control elements addressed by AQ-2.
QSA-GSM-3	Construction BMPs for soil erosion. Monitor water levels for risk of liquefaction.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2, AQ-3 and QSA-GSM-1.
Geologic Resources Subtotal		1,999	
Hazards			
QSA-HHM-1	Assess impacts on local emergency response plans. Complete Phase I studies for potential contamination.	268	Assessment to be implemented at start of efficiency conservation period in 2008. Assumes 10 sites require assessment and 5 sites require a Phase 1 audit.
Hazards Subtotal		268	
Aesthetics			
A-1	Relocate recreation facilities and develop interpretive facilities and materials.	0	Costs addressed in measures R-7 and R-10.
SWRCB-A-1	Aesthetic impacts from drop in Salton Sea level.	0	Addressed by 15 Year Minimization Plan and A-1.
Aesthetics Subtotal		0	
TOTAL CEQA		60,236	

Estimated CESA 2081 Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2003) - Yr 45	Notes and explanation of zero-cost items.
Backwater/Marsh	Create and maintain 16.25 acres of marsh and backwater habitat	1,268	Begins 2003, to be completed within 5 years
TOTAL CESA 2081		1,268	

Note: CESA LCR 2081 cost estimate is for mitigation acreage and actions that are in addition to those required in the 2001 Lower Colorado River BO, and assumes that BO measures will be acceptable as satisfaction of comparable 2081 requirements.

Estimated 2001 Lower Colorado River BO Costs

Condition No.	Mitigation Measure	Present Value in Thousands (\$2001) - Yr 45	Notes and explanation of zero-cost Items.
Conservation Measure 1	Stock 10,000 sub-adult razorback suckers into the Colorado River	*	Included in funding agreement
Conservation Measure 2	Create, restore, and maintain 38.25 acres of marsh and backwater habitat	*	Included in funding agreement
Conservation Measure 3	Fund the capture of wild-born or F1 generation bonytails	*	Included in funding agreement
Conservation Measure 4	Restore and maintain 186 acres of southwestern willow flycatcher habitat along the LCR between Parker and Imperial Dams	*	Included in funding agreement
TOTAL 2001 BO		3,000	

* Mitigation Measures shall be accomplished through an agreement with the U.S. Bureau of Reclamation, under which Reclamation shall undertake all required measures in the 2001 LCR BO attributable to the transfer of 200,000 AFY in return for payment of \$3 million in 2001 dollars.

EXHIBIT B

EXHIBIT B

HCP Mitigation Requirements

The HCP Mitigation Requirements include the following measures and requirements, all as described in greater detail in the June 2002 Draft HCP and the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service, as applicable:

June 2002 Draft HCP:

General – 1

General – 2

Salton Sea – 2

Salton Sea – 3, except that the survey of the areas designated as shoreline strand and adjacent wetland shall commence in 2018.

Tree Habitat – 1; Tree Habitat – 2; Tree Habitat – 3

Drain Habitat – 1; Drain Habitat – 2; Drain Habitat – 3

Desert Habitat – 1; Desert Habitat – 2; Desert Habitat – 3; Desert Habitat – 4; Desert Habitat – 5

Owl – 1; Owl – 2; Owl – 3; Owl – 4; Owl – 5; Owl – 6; Owl – 7; Owl-8; Owl-9

Pupfish -1; Pupfish -2; Pupfish – 3; Pupfish – 4; Pupfish – 5; Pupfish –6;

Razorback Suckers – 1

Agriculture – 1; Agriculture – 2

Other Species – 1

Other Species – 2

The monitoring and adaptive management requirements described in Chapter 4 of the Draft HCP.

2002 Biological Opinion

The 15-Year Minimization Plan described on page 17-18 of the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service

Pupfish Conservation Measure 2

Willow Flycatcher Conservation Measures 1, 2, 3, and 4

Brown Pelican Conservation Measure 2

Owl - 8	Avoid disturbing burrows. Replace impacted burrows at 2:1 ratio.	344	Habitat replacement to begin at start of efficiency conservation period in 2008.
Owl - 9	Farmer and public education program.	43	Begins in 2003.
Pupfish - 1	Maintain current levels of pupfish habitat.	862	Habitat maintenance to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 2	Minimize selenium impacts on pupfish.	4,383	Drain channel management to begin at start of efficiency conservation in 2008. Redundant with SWRCB order.
Pupfish - 3	Modifications to increase amount of pupfish drain habitat.	3,658	Habitat creation to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 4	Protocol for surveys to monitor pupfish presence.	863	Protocol developed by start of efficiency conservation period in 2008.
Pupfish - 5	Evaluate effect of drain maintenance on pupfish.	45	Study begins at start of efficiency conservation period in 2008.
Pupfish - 6	Gradual dewatering and salvage of stranded pupfish.	3,469	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Razorback Suckers - 1	Salvage fish and return to Colorado River.	40	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.

EXHIBIT D

Exhibit D

Use of Party Funds

<i>Expenditure</i>	<i>Millions (present value as of 2003)</i>
Environmental Mitigation Requirements	
Salinity Control of Salton Sea	\$ 50.0
Other Environmental Mitigation Requirements	<u>\$ 83.0</u>
Total Environmental Mitigation Requirements	\$133.0

EXHIBIT E

Exhibit E

Party Commitments to Fund Environmental Mitigation Costs

<i>Party</i>	<i>Amount (present value as of 2003)</i>
Imperial Irrigation District	\$44,061,350
Coachella Valley Water District	\$36,717,791
San Diego County Water Authority	\$52,220,859
TOTAL	\$133,000,000

EXHIBIT C
(Including Exhibits C-1, C-2 and C-3)
PAYMENT SCHEDULES

EXHIBIT C-1

CVWD JPA Payments			
	Year		27.61%
0	2003	\$	1,645,504
1	2004	\$	726,170
2	2005	\$	773,682
3	2006	\$	924,507
4	2007	\$	1,058,375
5	2008	\$	1,546,371
6	2009	\$	5,724,756
7	2010	\$	1,947,996
8	2011	\$	2,169,002
9	2012	\$	2,458,299
10	2013	\$	3,688,032
11	2014	\$	3,720,930
12	2015	\$	4,272,431
13	2016	\$	5,803,865
14	2017	\$	7,182,291
15	2018	\$	11,875,345
16	2019	\$	745,350
17	2020	\$	738,869
18	2021	\$	2,697,555
19	2022	\$	2,706,745
20	2023	\$	6,953,711
21	2024	\$	2,748,523
22	2025	\$	1,446,565
23	2026	\$	-
24	2027	\$	-
25	2028	\$	-
26	2029	\$	-
27	2030	\$	-
28	2031	\$	-
29	2032	\$	-
30	2033	\$	-
31	2034	\$	-
32	2035	\$	-
33	2036	\$	-
34	2037	\$	-
35	2038	\$	-
36	2039	\$	-
37	2040	\$	-
38	2041	\$	-
39	2042	\$	-
40	2043	\$	-
41	2044	\$	-
42	2045	\$	-
43	2046	\$	-
44	2047	\$	-
45	2048	\$	-
	Nominal:	\$	73,554,872
	6.0% PV:	\$	36,717,791

EXHIBIT C-2
IID JPA Payments

<i>Year</i>	
2003	\$ 131,395
2004	\$ 270,674
2005	\$ 418,191
2006	\$ 574,316
2007	\$ 739,432
2008	\$ 761,615
2009	\$ 941,356
2010	\$ 1,131,196
2011	\$ 1,331,579
2012	\$ 1,542,967
2013	\$ 1,765,841
2014	\$ 1,818,816
2015	\$ 1,873,380
2016	\$ 1,929,582
2017	\$ 1,987,469
2018	\$ 2,661,221
2019	\$ 3,373,610
2020	\$ 4,126,346
2021	\$ 4,473,828
2022	\$ 4,608,043
2023	\$ 4,746,284
2024	\$ 4,888,673
2025	\$ 5,035,333
2026	\$ 5,186,393
2027	\$ 5,341,985
2028	\$ 5,502,244
2029	\$ 5,667,311
2030	\$ 5,837,331
2031	\$ 6,012,451
2032	\$ 6,192,824
2033	\$ 6,378,609
2034	\$ 6,569,967
2035	\$ 6,767,066
2036	\$ 6,970,078
2037	\$ 7,179,181
2038	\$ 7,394,556
2039	\$ 7,616,393
2040	\$ 7,844,884
2041	\$ 8,080,231
2042	\$ 8,322,638
2043	\$ 8,572,317
2044	\$ 8,829,487
2045	\$ 9,094,371
2046	\$ 9,367,202
2047	\$ 9,648,218
Cumulative	\$209,506,885
Present Value	\$ 44,061,350

EXHIBIT C-3

SDCWA JPA Payments		
Year		39.26%
0	2003	\$ 2,340,273
1	2004	\$ 1,032,775
2	2005	\$ 1,100,347
3	2006	\$ 1,314,855
4	2007	\$ 1,505,244
5	2008	\$ 2,199,283
6	2009	\$ 8,141,875
7	2010	\$ 2,770,483
8	2011	\$ 3,084,803
9	2012	\$ 3,496,247
10	2013	\$ 5,245,201
11	2014	\$ 5,291,989
12	2015	\$ 6,076,346
13	2016	\$ 8,254,386
14	2017	\$ 10,214,814
15	2018	\$ 16,889,380
16	2019	\$ 1,060,053
17	2020	\$ 1,050,836
18	2021	\$ 3,836,522
19	2022	\$ 3,849,593
20	2023	\$ 9,889,722
21	2024	\$ 3,909,010
22	2025	\$ 2,057,337
23	2026	\$ -
24	2027	\$ -
25	2028	\$ -
26	2029	\$ -
27	2030	\$ -
28	2031	\$ -
29	2032	\$ -
30	2033	\$ -
31	2034	\$ -
32	2035	\$ -
33	2036	\$ -
34	2037	\$ -
35	2038	\$ -
36	2039	\$ -
37	2040	\$ -
38	2041	\$ -
39	2042	\$ -
40	2043	\$ -
41	2044	\$ -
42	2045	\$ -
43	2046	\$ -
44	2047	\$ -
45	2048	\$ -
Nominal:		\$ 104,611,375
6.0%	PV:	\$ 52,220,859

EXHIBIT D

SCHEDULE FOR PAYMENT TO IID FOR MITIGATION WATER

<i>Year</i>	Mitigation Water	<i>Mitigation Payments</i>
2003	5,000	\$454,335
2004	10,000	\$933,658
2005	15,000	\$1,439,001
2006	20,000	\$1,971,431
2007	25,000	\$2,532,056
2008	25,000	\$2,601,688
2009	30,000	\$3,207,881
2010	35,000	\$3,845,447
2011	40,000	\$4,515,654
2012	45,000	\$5,219,814
2013	70,000	\$8,343,002
2014	90,000	\$11,021,702
2015	110,000	\$13,841,421
2016	130,000	\$16,807,889
2017	150,000	\$19,927,045

- Present Value of Payments: \$50 million
- Interest rate: 6% per Exhibit A of Environmental Cost Sharing Agreement

EXHIBIT E
IID PAYMENTS TO SALTON SEA RESTORATION FUND

Year	
2003	\$29,638
2004	\$61,054
2005	\$94,329
2006	\$129,545
2007	\$166,789
2008	\$171,793
2009	\$212,336
2010	\$255,157
2011	\$300,356
2012	\$348,038
2013	\$398,310
2014	\$410,259
2015	\$422,567
2016	\$435,244
2017	\$448,301
2018	\$600,275
2019	\$760,965
2020	\$930,755
2021	\$1,009,134
2022	\$1,039,408
2023	\$1,070,590
2024	\$1,102,708
2025	\$1,135,789
2026	\$1,169,863
2027	\$1,204,959
2028	\$1,241,108
2029	\$1,278,341
2030	\$1,316,691
2031	\$1,356,192
2032	\$1,396,878
2033	\$1,438,784
2034	\$1,481,947
2035	\$1,526,406
2036	\$1,572,198
2037	\$1,619,364
2038	\$1,667,945
2039	\$1,717,983
2040	\$1,769,523
2041	\$1,822,608
2042	\$1,877,287
2043	\$1,933,605
2044	\$1,991,613
2045	\$2,051,362
2046	\$2,112,903
2047	\$2,176,290
Cumulative Value	\$47,257,190
Present Value	\$9,938,650

CONSERVATION AGREEMENT

AMONG

**THE BUREAU OF RECLAMATION,
IMPERIAL IRRIGATION DISTRICT,
COACHELLA VALLEY WATER DISTRICT, and
SAN DIEGO COUNTY WATER AUTHORITY**

EXHIBIT C



United States Department of the Interior

BUREAU OF RECLAMATION

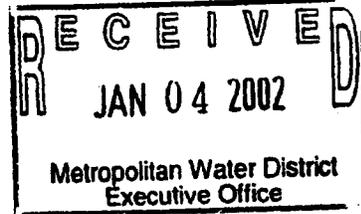
Lower Colorado Regional Office

P.O. Box 61470

Boulder City, NV 89006-1470

IN REPLY REFER TO:
BCOO-1000
ENV-7.00

DEC 19 2002



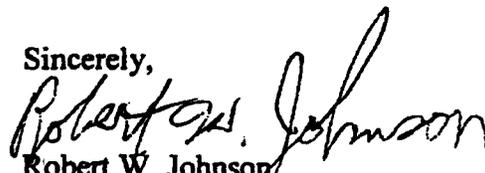
Mr. Ronald R. Gastelum
Chief Executive Officer
The Metropolitan Water District
of Southern California
PO Box 54143
Los Angeles, California 90054-0153

Subject: Final Fish and Wildlife Service Biological Opinion on Reclamation's Proposed Section 7(a)(1) Conservation Measures for Listed Species in the Imperial Irrigation District/Salton Sea Areas

Dear Mr. Silva

I am pleased to provide you a copy of the subject final Biological Opinion (BO). This completes the Section 7 consultation initiated by Reclamation in July of this year and provides Endangered Species Act compliance for the water transfer between Imperial Irrigation District and the San Diego County Water Authority. We appreciate the cooperative effort of all parties in completing the consultation. The document is now available to be forwarded to the California Department of Fish and Game for their consideration of a consistency determination to achieve compliance with the California Endangered Species Act. We view this as a significant milestone in completing the required activities for implementation of the California Plan and the Quantification Settlement Agreement (QSA). We remain hopeful that execution of the QSA can still be achieved by the end of this year.

Sincerely,


Robert W. Johnson
Regional Director

Enclosure

Identical Letter Sent to:

Mr. Tom Levy
General Manager
Coachella Valley Water District
P.O. Box 1058
Coachella, California 92236

Ms. Maureen Stapleton
General Manager
San Diego County Water Authority
4677 Overland Avenue
San Diego, California 92123

**Mr. Jesse Silva
General Manager
Imperial Irrigation District
PO Box 937
Imperial CA 92251**

**cc: Mr. Tom Hannigan
Director
Department of Water Resources
State of California,
1416 Ninth Street
Sacramento, California 95814**

**Mr. Jim Bartel
Field Supervisor
U.S. Fish and Wildlife Service
2730 Loker Avenue
West Carlsbad, California 93208**

**Mr. Gerald Zimmerman
Executive Director
Colorado River Board of California
770 Fairmont Avenue, Suite 100
Glendale, California 91203
(w/cy encl to ea)**

**Mr. Steve Thompson
United States Fish and Wildlife Service
2800 Cottage Way, Suite W-2606
Sacramento, California 95825**

**Mr. Robert C. Hight
Director
Department of Fish and Game
1416 Ninth Street, Sacramento, California 95814
(w/e-mail encl to ea)**



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92009

In Reply Refer to: FWS-IMP-2628.10

DEC 18 2002

MEMORANDUM

To: Regional Director, Lower Colorado Region,
Bureau of Reclamation, Boulder City, Nevada

From: *Adrian* Assistant Field Supervisor, Carlsbad Fish and Wildlife Office,
Fish and Wildlife Service, Carlsbad, California

Subject: Draft Biological Opinion on the Bureau of Reclamation's Voluntary Fish and Wildlife Conservation Measures and Associated Conservation Agreements with the California Water Agencies

This document transmits the Fish and Wildlife Service's (Service) biological opinion for the proposed Bureau of Reclamation (Reclamation) Voluntary Fish and Wildlife Conservation Measures and associated conservation agreements to be entered into by Reclamation and the California water agencies, and their effects on the federally listed species, and their designated critical habitat where applicable, in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The voluntary fish and wildlife conservation measures are being implemented as part of Reclamation's existing authorities pursuant to section 7(a)(1) of the ESA. The California water agencies have offered to enter into conservation agreements with Reclamation to implement these measures to help offset the impacts of the water conservation and transfer activities necessary to implement the California Plan for the Colorado River discussed below. Therefore, this document will also provide an analysis of the interrelated effects of the Imperial Irrigation District (IID) water conservation activities necessary to provide for the transfer of water from IID to the San Diego County Water Authority (SDCWA), Coachella Valley Water District (CVWD) and Metropolitan Water District of Southern California (MWD) as called for in that plan.

We received your July 23, 2002, memorandum requesting formal consultation on July 25, 2002. The following species were included in the Biological Assessment:

desert pupfish	<i>Cyprinodon macularius</i>	Endangered (E), with Critical Habitat (CH)
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	E
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E

least Bell's vireo	<i>Vireo bellii pusillus</i>	E, CH
California brown pelican	<i>Pelecanus occidentalis</i>	E
bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened (T)
California least tern	<i>Sterna antillarum browni</i>	E
razorback sucker	<i>Xyrauchen texanus</i>	E, CH
mountain plover	<i>Charadrius montanus</i>	Proposed T
California black rail	<i>Laterallus jamaicensis coturniculus</i>	State T

This biological opinion is based on information provided in: (1) Biological Assessment (BA) and subsequent Errata for the above proposed project developed by Reclamation, (2) Environmental Impact Report, including draft Habitat Conservation Plan developed by the IID, and (3) other existing information in the Service's files. A complete administrative record of this consultation is on file at the Service's Carlsbad Fish and Wildlife Office.

As a result of our review of the proposed fish and wildlife conservation measures and the interrelated effects of the water conservation activities, we have determined that some of these species are not likely to be adversely affected. The Service anticipates that the proposed fish and wildlife conservation measures and IID's water conservation activities are not likely to adversely affect the southwestern willow flycatcher, least Bell's vireo, bald eagle, California least tern, and razorback sucker for the reasons described below. No additional discussion of these species is included herein. We are including a discussion of the California black rail (*Laterallus jamaicensis coturniculus*) for the purposes of technical assistance.

Although the fish and wildlife conservation measures and the interrelated effects of the water conservation activities may affect the southwestern willow flycatcher, adequate migration resources will remain in the Salton Trough to meet this species' migration needs. Given that this species is not currently known to breed in the area but that Reclamation and its conservation agreement partners propose to offset losses of suitable breeding habitat that result from the water conservation activities, we concur with Reclamation's conclusion that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect, but are not likely to adversely affect, the southwestern willow flycatcher.

Although the fish and wildlife conservation measures and the interrelated effects of the water conservation activities may affect the least Bell's vireo, adequate migration resources will remain in the Salton Trough to meet this species' migratory needs. Given that this species is not currently known to breed in the area and records of its use of the area are limited, we have determined that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities are not likely to adversely affect the least Bell's vireo.

The bald eagle has been observed at the Salton Sea irregularly in the winter months and is not known to nest there. The anticipated water conservation-related changes in Salton Sea salinity could affect fish availability. However, the low numbers of birds recorded using the Salton Sea (1-3/year) suggest that the bald eagle is not dependent on the Salton Sea during winter migration. Fish are expected to continue to be available to a more limited extent at the river deltas and other smaller lakes in the Imperial Valley (Fig Lagoon, Finney and Ramer Lakes, Wiest Lake, and

Sunbeam Lake) in addition to the waterfowl available in winter at the State and Federal wildlife refuges and the many duck clubs present in the Imperial Valley. No impacts are anticipated as a direct result of on-farm or system water conservation activities. Given the anticipated long-term availability of forage in the area and the low number of bald eagles expected to be present, the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the bald eagle.

The least tern has been observed irregularly at the Salton Sea. Because the numbers of least terns that have been recorded at the Salton Sea are very low (fewer than 10 records at the Sonny Bono Salton Sea NWR), it does not appear that the California least tern is dependent upon the Salton Sea as a migratory stopover. It is unlikely that the increase in salinity and corresponding loss of fish associated with the interrelated effects of the water conservation activities would adversely affect the California least tern. We anticipate that some fish will continue to be available at the mouths of the rivers and drains. Based on this information, we have determined that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the California least tern.

The razorback sucker is only expected to be found in the main delivery canals and storage reservoirs within the Imperial Valley. Although the total flows in the main canals will be reduced, elevation is tightly controlled to maximize hydro-electric power generation and water delivery efficiency. The only canal lining planned for water conservation involves the smaller lateral canals. There are no records of razorback suckers being found in the smaller lateral canals. As no physical modifications are planned to the main canal and reservoir facilities that are known to be used by razorback suckers as part of the water conservation and transfer program and the changes in flows in the main canals are expected to be minor, no adverse impacts to this species are anticipated. We concur with Reclamation's conclusion that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the razorback sucker. The lining of the All American Canal has been addressed through a separate consultation process and is not included in this analysis.

In Reclamation's BA a conclusion was provided that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect but are not likely to adversely affect the mountain plover. Reclamation has withdrawn this conclusion through the comments provided on the draft biological opinion. Therefore, we will not be conferencing on this species. Should an incidental take exemption be required as a result of a future listing of the mountain plover for any impacts associated with the proposed fish and wildlife conservation measures and/or interrelated effects of IID's water conservation activities, Reclamation will need to re-initiate consultation under section 7 of the ESA with the Service.

CONSULTATION HISTORY

A complete history of the Carlsbad Fish and Wildlife Office's participation in this process can be found in Attachment D.

Reclamation functions as the Water Master of the Colorado River on behalf of the Secretary of the Interior. In this capacity, Reclamation is responsible for the management of the use of the Colorado River by the various water rights holders throughout the Colorado River states. The Colorado River is divided into upper and lower basins for operational purposes. Operation of the lower Colorado River, from Pierce Ferry to the Southerly International Boundary, was addressed in a biological opinion from the Service dated April 30, 1997. By operation of contracts for permanent water delivery service executed in the 1930's, any unused Colorado River water by a seniority priority holder within California's allocation is directed to the next junior user. Thus, in Southern California, the Secretary is without the authority to direct unused Colorado River water by a contractor to any other purpose other than the next contractor in priority.

In an effort to prepare for likely reductions of Colorado River water available to California, the Colorado River Board of California prepared the California Plan, which was released in draft form in May 2000 and is available for public review at www.crb.water.ca.gov/reports.htm. The California Plan provides a framework for the State to coordinate and assist in the cooperative implementation of diverse programs, projects, and other activities that would reduce California's use of Colorado River water and facilitate conformance with California's annual apportionment. It involves the conservation of water in southern California and the transfer of conserved water from agricultural to predominantly urban uses. The proposed Quantification Settlement Agreement (QSA) is designed to include key contractual arrangements among IID, MWD, and CVWD, which are needed to implement major components of the California Plan.

The Service initially met with Reclamation, IID and SDCWA to discuss the transfer on January 6, 1999. This initial meeting was the introduction to the proposed project for the Service. A second meeting occurred on February 19, 1999, which focused on the issues of Endangered Species Act (ESA) compliance through section 7 versus section 10, direct and indirect impacts in the Imperial Valley and San Diego County, and the California 4.4 Plan. On December 7, 1999, the Service began regular meetings with IID to begin the development of the Habitat Conservation Plan (HCP) to address all impacts within the Imperial Valley, the Salton Sea, and along the All-American Canal (exclusive of canal lining activities). The lower Colorado River species were also discussed.

From February - August 2000, the Service had monthly meetings with IID to provide guidance on their development on the HCP. On September 13, 2000, IID indicated that they should be ready to submit the HCP to the resource agencies by the end of November or first of December. On November 6, 2000, an amended Notice of Intent was published by Reclamation in the Federal Register to address coverage of permit issuance in the draft EIR/EIS. A 30-day comment period followed during which the Service received three comment letters.

As a result of proposed adoption of the Interim Surplus Guidelines and the change in point of diversion of up to 400,000 acre-feet per year of Colorado River water, Reclamation consulted with the Service on endangered species impacts in 2000. On January 12, 2001, the Service's Phoenix Fish and Wildlife Office issued their biological opinion to Reclamation, which covered the Interim Surplus Criteria, the Secretarial Implementation Agreements and Biological Conservation Measures to be implemented in association with the proposed modifications in river operations, including the change in point to diversion for the water to be transferred to San Diego County Water Authority.

That document provides incidental take to Reclamation for their actions on the lower Colorado River that are required to implement the water transfer as part of the California 4.4 Plan. Indirect effects of the transfer in receiving areas were discussed in the document. Incidental take has already been provided in some areas through regional HCPs. Incidental take in areas not covered by regional HCPs was deferred to coverage as future projects are developed. Incidental take in the Imperial Valley and Salton Sea was to be addressed in IID's HCP, and incidental take associated with the use of the water by CVWD was to be covered by participation in a regional Coachella Valley HCP, or their own HCP.

Beginning in April of 2001 through May of 2002 (see the Attachment D for details), the Service and the California Department of Fish and Game (CDFG) were involved in intensive discussions with IID on the HCP. Meetings were scheduled weekly for two days to try to resolve issues associated with the HCP. While significant progress was made on the Imperial Valley portions of the HCP, significant uncertainty remained with the approaches being considered for the Salton Sea fish-eating bird species. Given the short time frame remaining, Reclamation determined in July of 2002 that it did not appear to be feasible to complete the HCP and permitting process by December 31, 2002. Recognizing the need for incidental take coverage in the absence of a HCP/section 10 (a)(1)(b) permit, Reclamation has developed a set of fish and wildlife conservation measures to be undertaken by Reclamation and/or its conservation agreement partners for listed species as called for under section 7(a)(1) of the ESA. The desert pupfish, Yuma clapper rail, southwestern willow flycatcher and California brown pelican were to be addressed. Reclamation then began developing the BA including the proposed fish and wildlife conservation measures along with the interrelated water conservation and transfer activities. Under this process CDFG would have the opportunity to determine whether the BA and biological opinion are compatible with the State's permitting process. IID is responsible for maintenance issues, which will need to be addressed separately as such issues are not part of this action and are outside the scope of this consultation.

On July 25, 2002, the Service received Reclamation's request for initiation of formal consultation (dated July 23, 2002) along with a BA for Reclamation's proposed voluntary fish and wildlife conservation measures.

The Service, Reclamation, and CDFG met on August 22, 2002, to discuss the BA. We discussed the proposed measures for the Yuma clapper rail and the southwestern willow flycatcher at length. The California black rail will be added to the BA. The acreage of marsh mitigation already included for the Yuma clapper rail is believed to be conservative enough to include them given the salinity acreage is based on the most sensitive vegetation and the selenium acreage was based on total vegetated acres. The mountain plover needs additional analysis to reflect its specific habitat preferences and the possibility that only hay crops may be fallowed. The Service, Reclamation and CDFG re-convened on August 29-30, 2002, to continue the discussion on the BA. We went on to discuss the desert pupfish. The lack of a refugium pond appeared to be the largest gap relative to what had been agreed to in the HCP. Reclamation agreed to add this to the first measure for pupfish. Reclamation agreed to several changes to the BA to address Service and CDFG concerns. Language will be incorporated from the HCP to indicate more specifically what monitoring will be required, and a requirement for a monitoring plan that is approved by the Service and CDFG will be added. The Service suggested that the document needed additional clarification on how it was

decided that species would be included or not included in the different levels of analysis. Reclamation agreed to re-evaluate the language that is currently in the document and add details as needed. We briefly discussed other more general comments. Reclamation agreed to evaluate our comments and incorporate changes as appropriate. The consultation period officially closed October 23, 2002, and Reclamation provided an updated project description to the Service on that date. Through a brief phone conversation with Bruce Ellis of Reclamation on October 23, 2002, the addition of rail surveys to Rail Measure 3 and the word "monthly" to the sentence on brown pelican surveys in Brown Pelican Measure 1 were approved.

A conference call was held on November 27, 2002, to discuss the remaining outstanding issues in the consultation. In that discussion the Service informed Reclamation that we did not concur with Reclamation's conclusion that the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities may affect, but are not likely to adversely affect, the mountain plover. We had determined that the water conservation activities were likely to adversely affect this species as a result of the loss of up to 80,500 acres (1/3 of the acreage) of preferred crop types (alfalfa and Bermuda grass). The North American population of the mountain plover has been estimated at 9,000 birds (Brown *et al.* 2001). Wunder and Knopf (in press) surveyed wintering mountain plovers in Imperial Valley from 9-19 January 2001, and they recorded 4,037 plovers in 36 flocks ranging in size from 4 to 596 birds. This is believed to be nearly half of the current population (Fritz Knopf, USGS, pers. comm.), suggesting a recent shift in use from California's Central Valley and making the Imperial Valley the most important wintering area for this species. Because of the high dependence of this species on appropriate field types for foraging in the Imperial Valley, large decreases in the acreage of the preferred crop types may interfere with the survival and recovery of the species. The specific acreage requirements for wintering mountain plovers have not been determined, so it is not possible to quantify the impacts to individual plovers at this time. Therefore, it would not be possible to complete a conference opinion for this species.

We relayed to Reclamation that in order to properly evaluate the potential effects of the proposed conservation measures and the potential interrelated effects, it would be necessary to determine the winter habitat requirements for this species in the Imperial Valley and consider the effects of the proposed fish and wildlife conservation measures and the interrelated effects of IID's water conservation activities in that context. Ongoing monitoring of the mountain plover population, identification of its specific wintering habitat requirements and quantification of the available foraging habitat in the Imperial Valley would be required to quantify the impacts associated with the proposed conservation measures and the interrelated effects of the water conservation activities and to prevent a level of loss of their foraging habitat to an extent that survival and recovery of this species could be impacted. In their comments on the draft biological opinion transmitted to the Service on December 9, 2002, Reclamation withdrew their request for conference on this species. They withdrew their determination that the proposed fish and wildlife conservation measures and interrelated water conservation activities were not likely to adversely affect the mountain plover and the voluntary conservation measure that they had provided in their program for this species.

DESCRIPTION OF THE PROPOSED ACTION

In the biological opinion issued by the Service in January 2001, an evaluation of direct and indirect effects of the California 4.4 plan anticipated that effects on listed species within the IID Service area and Salton Sea would be addressed through a Habitat Conservation Plan (HCP) being developed at that time by IID. Because of the complexity of the issues associated with the HCP, it became necessary to use an alternative approach for ESA compliance to meet the deadline for execution of the QSA of December 31, 2002. Reclamation developed the alternative approach to ESA compliance via section 7 described below so that execution of the QSA could proceed on December 31, 2002 as scheduled. If the QSA is not implemented, Reclamation may choose not to undertake the proposed fish and wildlife conservation measures. The QSA has been amended to provide an additional year for completion of the HCP that would cover a broader array of species and additional activities in the Imperial Valley including operations and maintenance. The incidental take exemption provided by this biological opinion will remain in effect for Reclamation and the California water agencies with which it has executed conservation agreements as long as Reclamation and its conservation agreement partners implement the fish and wildlife conservation measures as described in this project description and the terms and conditions of the Incidental Take Statement provided below. This biological opinion shall remain in effect for the duration of the water conservation and transfer program unless the California water agencies provide a HCP that addresses the federally-listed species in and around the Salton Sea and the incidental take associated with the proposed fish and wildlife conservation measures and water conservation activities is permitted through a section 10(a)(1)(B) incidental take permit.

Conservation Measures

The Proposed Action is implementation of voluntary fish and wildlife conservation measures in conjunction with non-federal parties designed to conserve listed species found in the area of the Salton Sea (including adjacent areas in the Coachella and Imperial Valleys). The proposed voluntary fish and wildlife conservation measures are designed, in part, to avoid, minimize, and offset impacts of IID's water conservation activities on federally listed species. Reclamation proposes to implement the proposed fish and wildlife conservation measures, either separately or cooperatively with some or all of the QSA beneficiaries (IID, SDCWA, CVWD, and MWD) in the State of California as partners. Specific conservation agreements for implementation of the fish and wildlife conservation measures will be developed with willing partners during the consultation period, and actual execution of the agreements will occur prior to the issuance of a Record of Decision (ROD) by Reclamation. Reclamation currently anticipates that the majority of the fish and wildlife conservation measures will be carried out by the California water agencies. Habitat-based and species-specific fish and wildlife conservation measures are proposed. Habitat-based measures are designed to offset the potential loss of habitat values (quantity and quality) with an overall objective of maintaining or increasing, where possible, the value (amount and/or quality) of each habitat used by federally listed species addressed in the voluntary fish and wildlife conservation program (e.g., drain, tamarisk scrub, and Salton Sea habitats) consistent with Reclamation's section 7(a)(1) responsibilities.

Reclamation and its conservation agreement partners will meet with the Service and CDFG within 90 days of the issuance of Reclamation's ROD to determine a schedule for the development of the management and monitoring plans and the implementation of the voluntary fish and wildlife conservation measures described below.

Desert Pupfish

Various surveys conducted by the CDFG and others have recorded the presence of desert pupfish in many of IID's drains that discharge directly to the Salton Sea (Sutton 1999). Although IID routinely maintains adequate drainage in these channels by removing vegetation and sediment, these drains provide the habitat conditions (e.g., water quality, food source, and aquatic vegetation) necessary to support pupfish. Implementation of water conservation activities by IID has the potential to degrade water quality in the drains occupied by pupfish.

The intent of the desert pupfish conservation measures is to maintain viable populations in the action area by maintaining or increasing pupfish habitat in IID's drains relative to current levels (i.e., no net loss) and maintaining connectivity among drain populations.

1. Minimize the impacts of potential increases in Salton Sea salinity concentrations on pupfish habitat by maintaining connectivity among drains (Pupfish Conservation Measure 1)
2. Minimize the impacts of potential increases in selenium concentrations and possible other contaminants in the drainage system resulting from water quality changes (Pupfish Conservation Measure 2)

Pupfish Conservation Measure 1: Connectivity Impacts

In cooperation with its conservation agreement partners, Reclamation will ensure that an appropriate level of connectivity is maintained between pupfish populations in individual drains (in CVWD's area at the north end of the Salton Sea and in IID's area at the south end of the sea) connected to the Salton Sea either directly or indirectly and that drain habitat below the first check will be maintained in the event that conditions in the Salton Sea become unsuitable for pupfish. Reclamation and its conservation agreement partners will undertake planning and studies so that before the salinity of the Salton Sea reaches 90 ppt (or lower as determined by the Service and CDFG), or physical barriers impede pupfish movement, the parties can implement a detailed plan for ensuring genetic interchange among the pupfish populations in the drains.

In cooperation with its conservation agreement partners, Reclamation will maintain the amount of potential pupfish drain habitat (expressed as linear channel distance) over the term of IID's water conservation and transfer project. This will be accomplished as the Sea recedes by extending or modifying existing IID and CVWD drains or by maintaining the suitability of naturally created drain channels. The design, configuration, and management of these areas will be developed jointly with Reclamation, Service and CDFG staff, and will be developed in consideration of the specific physical characteristics of pupfish habitat (e.g., water depth and velocity, and channel width) and water quality (e.g., turbidity and selenium concentration). These extended or modified drains will

be monitored beginning with the first extension or modification and continuing for the term of the proposed fish and wildlife conservation measures and interrelated water conservation activities. If pupfish use of these areas cannot be established within 5 years, Reclamation and its conservation agreement partners will work with the Service and CDFG to determine the potential cause(s) for pupfish absence. Reclamation and its conservation agreement partners, in coordination with the Service and CDFG, will implement actions in the management, operation or maintenance of the extended or modified drains that are appropriate to correct conditions that are causing the absence of the pupfish. These actions may entail minor adjustments to the channel configuration (channel and pool depths, flow velocity, connectivity, and turbidity), vegetation management, and timing of scheduled maintenance. It is not anticipated that these actions will entail construction of new or replacement drain habitat, require supplemental flows in the drains, or other actions that may interfere with normal agricultural operations. Once pupfish presence is confirmed, monitoring will continue as per Pupfish Conservation Measure 3.

Reclamation, in cooperation with its conservation agreement partners, also will construct and maintain one refugium pond consistent with the Desert Pupfish Recovery Plan. This pond will be maintained for the purpose of assisting in the recovery efforts for that species. The parties will work with the Service and CDFG to determine the location, timing, and technique in implementing this measure. After pupfish have been stocked into the refugium pond, it will be monitored for 5 years to determine if successful reproduction is occurring. If successful reproduction is not occurring, Reclamation and its conservation agreement partners will meet with the Service and CDFG within 6 months to determine the potential cause(s) for the failure of pupfish to reproduce in the refugium. Reclamation and its conservation agreement partners, in coordination with the Service and CDFG, will implement actions in the management, operation or maintenance of the refugium that are appropriate to correct conditions that are causing the failure of the pupfish to reproduce. These actions may entail minor adjustments to the pond configuration (pool depth and shoreline complexity), vegetation management, and timing of scheduled maintenance. It is not anticipated that these actions will entail construction of a new or replacement refugium pond or other actions that may interfere with normal agricultural operations.

Pupfish Conservation Measure 2: Selenium Impacts

Reclamation and its conservation agreement partners will commit to fund a study program to determine the impacts of selenium on desert pupfish. The objective of the study program will be to identify specific selenium thresholds at which pupfish survival or reproduction is adversely affected. These studies will include water-borne exposures but will focus on dietary exposures as dietary exposure is believed to be of greater importance in how selenium-induced effects are manifested in fish. The thresholds will be expressed in terms of tissue concentration, water concentration, or dietary concentration as appropriate based on the study results. In addition to evaluating the effects of selenium on pupfish, the study program also may investigate the appropriateness of using another fish species (e.g., sailfin molly, *Poecilia latipinna*) as a surrogate species for the desert pupfish. This will facilitate long-term monitoring by maximizing the ability to interpret the results of chemical analyses of samples collected in the pupfish drains. Sufficient funding will be provided to support the completion of the study program and identification of a selenium threshold within 7 years. A detailed study plan will be developed in cooperation with the Service and CDFG.

Concurrently, Reclamation and its conservation agreement partners will implement a monitoring program to establish baseline conditions in the drains in the Imperial Valley that discharge directly to the Salton Sea. The monitoring program will include selenium concentrations in water, sediments, and dietary components of the desert pupfish. If the study program includes the investigation of possible surrogate species, collections of the surrogate species will be made to determine tissue concentrations of selenium in these fish. In addition, pupfish presence will be monitored (see Pupfish Conservation Measure 3). A detailed monitoring plan will be developed in cooperation with the Service and CDFG.

Within 2 years of completion of the study program, Reclamation and its conservation agreement partners will meet with the Service and CDFG to review the results of the study program and the monitoring data. If the available information reviewed in this process indicates that the pupfish inhabiting the Imperial Valley drains that discharge directly to the Salton Sea are at risk from selenium, Reclamation will work in cooperation with IID, the Service and CDFG to identify and implement the best means for managing IID's drain channels to minimize potential selenium impacts on pupfish. Measures to be considered may include splitting combined drain channels (drain/operational water) to improve water quality, providing limited biological treatment, including use of discharge from created managed marsh habitat described below, and consolidating channels and blending flows.

Pupfish Conservation Measure 3: Management and Monitoring

In cooperation with its conservation agreement partners, Reclamation will carry out routine monitoring of pupfish presence to confirm continued presence in the drains and to develop information useful in adjusting management actions for this species. In cooperation with the Service and CDFG, Reclamation and its conservation agreement partners will develop a survey protocol that is appropriate for determining pupfish presence in the drains. As part of the baseline monitoring program, Reclamation and its conservation agreement partners will monitor pupfish presence in each of the pupfish drains for five to seven consecutive years to establish patterns of use and to augment baseline information. Prior to the development of a revised protocol, the existing protocol to survey pupfish will be used. If possible, the revised protocol and the existing protocol will be conducted concurrently to calibrate the two methods with each other.

The need for continued monitoring of water quality, sediment, dietary components and pupfish presence will be re-assessed during the review at the end of the study and baseline survey program. If it is determined that continued monitoring is necessary, Reclamation and its conservation agreement partners will work with the Service and CDFG to develop an appropriate long-term monitoring program.

Yuma Clapper Rail and California Black Rail

In the action area, Yuma Clapper Rail predominantly occurs on State and Federal refuges. Agricultural drains support limited use by clapper rails. Breeding is not verified in the drains, but rail presence is documented in surveys of drains during the breeding season. The California black rail is known to occur in seepage areas along the All American Canal, but its use of the drains has

not been documented. Its habitat affinities are similar to the Yuma clapper rail. The IID drainage system is estimated to contain about 63 acres of cattails. Common reed, tamarisk, and arrowweed are the predominant species of the remaining 589 acres of vegetation in the drainage system. Potential project impacts on rails consist of loss and degradation of cattail vegetation in drains through increased salinity and exposure to increased selenium concentrations in drains.

The acreage of cattails supported in the drains could potentially be reduced by 4 acres due to increased salinity, and an additional 23 acres of remaining cattail vegetation could be subjected to increased salinity levels that could stunt growth and reduce vigor of the plant. If fallowing is used to conserve water, there would be no change in salinity in drains and, therefore, no impacts to cattail vegetation. Under current conditions, average impairment in rail egg hatchability due to selenium levels is 3 percent. As a result of IID's water conservation activities, hatchability could be impaired up to 6 percent, comprising a 3 percent increase above the current condition. Use of fallowing as a water conservation method would reduce the level of impairment due to increased selenium concentrations in the drains.

Rail Conservation Measure 1: Salinity Impacts

Thirty-one acres of high quality managed marsh will be created to offset potential salinity impacts (2:1 mitigation for 4 acres lost, and 1:1 mitigation for the additional 23 acres of reduced quality habitat). In cooperation with its conservation-agreement partners, Reclamation will work with the Service and CDFG to determine the design and location of these marshes. Design considerations will include the needs of both rail species. Based on concerns about the availability of suitable quality water in the Imperial Valley, it is anticipated that the location of these marshes will be elsewhere in the action area.

Rail Conservation Measure 2: Selenium Impacts

Forty-two acres of additional high quality managed marsh habitat will be created to offset the potential selenium impacts on rail egg hatchability. If feasible, this marsh habitat will be located adjacent to the managed marsh habitat discussed in Rail Conservation Measure 1. The created habitat will be monitored for selenium and salinity if located in the vicinity of the Salton Sea. The total amount of 73 acres of habitat will be created within 10 years of completion of this consultation. Design considerations will include the needs of both rail species. The selenium concentration of the water used to support the managed marsh habitat would be water of the same selenium concentration as lower Colorado River water or that meets an EPA criterion for protection of aquatic life that has received a "No Jeopardy" determination from the Service, whichever is greatest.

Rail Conservation Measure 3: Management and Monitoring

A long-term adaptive management and monitoring plan will be developed for the mitigation marsh and submitted to the Service and CDFG for review and approval prior to initiation of habitat creation activities. The management plan will consider the requirements of both the Yuma clapper rail and the California black rail. An acceptable monitoring plan for the mitigation marshes, which

specifies performance criteria for vegetation growth and the frequency and techniques used in monitoring including rail surveys, will be developed. The created marsh habitat will be maintained and managed for at least the duration of the QSA transfers. Water conservation activities that continue to cause take of listed species beyond the term of the QSA water transfers would require continued mitigation.

Following creation of the managed marsh habitat, the created habitat will be surveyed for Yuma clapper rails by Reclamation and its conservation agreement partners. The surveys will be conducted annually for 5 years following creation of the managed marsh. After the initial five-year survey period, the rail surveys will continue at the same frequency that clapper rail surveys are conducted on the federal wildlife refuge but no less frequently than once every five years. Currently, the federal wildlife refuge is surveyed annually for clapper rails. Surveys for Yuma clapper rails will follow the prevailing protocol as outlined in Attachment C. Reclamation and its conservation agreement partners will work with the Service and CDFG to further refine the survey protocol as needed for the created habitat.

Reclamation, its conservation agreement partners, the Service, and CDFG will annually review results of rail surveys and assess the effectiveness of the managed marsh in providing habitat for clapper rails. In evaluating the effectiveness of the marsh in providing habitat for clapper rails, Reclamation, its conservation agreement partners, the Service, and CDFG will consider the use of the State and Federal refuges by clapper rails as compared to the managed marsh. By considering and comparing use (occurrence, abundance, and life history functions) of the managed marsh and at State and Federal refuges (if available), it will be possible to assess whether the managed marsh is providing for the species, while at the same time taking into account stochastic factors not attributable to management. Management will be adjusted as necessary based on the results of the annual surveys.

The managed marsh will be considered successful if Yuma clapper rails and California black rails have been found to use the marsh during the breeding season at any time during the 5 years following the creation of the marsh. If it is determined that either one or both of the species did not use the managed marsh during the 5 years, then Reclamation and its conservation agreement partners will meet with the Service and CDFG to identify possible changes needed in the management of the marsh habitat.

Examples of actions that could be taken in adjusting management include, but are not limited to:

- Changes in flooding regime
- Vegetation management activities (e.g., replacement of failed plantings, burning, discing, flooding)
- Minor earth-moving activities within the managed marsh units
- Changes in water levels
- Predator control
- Invasive species control

Southwestern Willow Flycatcher

Although Southwestern Willow Flycatchers have been observed in low numbers during migration season, no breeding has been documented within the action area. Willow flycatchers have been reported using tamarisk and common reed along the Salton Sea and agricultural drains, and in seepage communities adjacent to the East Highline Canal during migration. In other areas within its range, Southwestern Willow Flycatcher has been documented using tamarisk stands for breeding, if these stands contain areas of saturated soils or standing water. Water conservation activities undertaken by IID have the potential to impact tamarisk stands within the action area. However, it is unknown if any of these stands have the necessary components to be considered suitable Southwestern Willow Flycatcher breeding habitat at this time.

Willow Flycatcher Conservation Measure 1: Evaluate Habitat

All potential cottonwood-willow and tamarisk stands will be evaluated for Southwestern Willow Flycatcher breeding habitat suitability. Using the Anderson and Ohmart classification system (1994), each Saltcedar III and IV and each Cottonwood-willow I, II, III, and IV stand will be evaluated for suitability based on density, structure, and presence of standing water or saturated soils during the breeding season. Suitable breeding habitat will be identified based on characterizations provided in the draft Southwestern Willow Flycatcher Recovery Plan.

These evaluations will take place prior to any IID water conservation activities which could impact tamarisk habitat. Upon completion of this initial evaluation, a specific protocol for the habitat monitoring (identified below as Conservation Measure 2) will be developed in consultation with the Service and CDFG. This protocol will address the timing and duration of monitoring activities and other details as required.

Willow Flycatcher Conservation Measure 2: Suitable Habitat Monitoring

If suitable Southwestern Willow Flycatcher breeding habitat is identified during Conservation Measure 1, this habitat will be monitored to quantify changes in the amount and quality of habitat. If suitable breeding habitat is lost or the quality of the habitat declines as a result of IID's water conservation activities so that it is no longer considered suitable breeding habitat, this loss will be offset through the creation and/or acquisition and preservation of higher quality, native riparian replacement habitat at a 1:1 ratio. Reclamation and its conservation agreement partners will work with the Service and CDFG to develop the specific survey protocol necessary to monitor and quantify changes in the amount and quality of breeding habitat in the future. A general approach is provided in Attachment A.

Willow Flycatcher Conservation Measure 3: Management and Monitoring of Habitat

A long-term adaptive management and monitoring plan will be developed for any replacement habitat whether created or acquired. This plan will include monitoring of all of the same characteristics of the habitat used in Measure 1 to determine suitability for breeding by southwestern willow flycatchers. The success criteria will be based on these suitability

characteristics such that the created or acquired habitat can be documented to include the suite of characteristics that makes it suitable for southwestern willow flycatcher breeding. This plan will be developed in consultation with the Service and CDFG. Specific locations for the replacement habitat would be identified in consultation with the Service and CDFG and would be located in the Salton Trough or the lower Colorado River corridor.

Willow Flycatcher Conservation Measure 4 - Take Minimization During Construction

IID could install seepage recovery systems along the East Highline Canal or lateral interceptors to capture operation discharges in the delivery system to conserve water. If suitable breeding habitat for southwestern willow flycatchers is identified in the seepage communities adjacent to the East Highline Canal or in locations to be impacted by lateral interceptor construction, removal of suitable habitat in association with these construction activities will be scheduled to occur outside the breeding season for the southwestern willow flycatcher. Specifically, removal of habitat would not occur between April 15 and August 15.

California Brown Pelican

Most California Brown Pelican use of the Salton Sea is by post-breeding visitors, with more limited use for wintering. These visitors are mostly young birds that disperse northward from breeding areas in the Gulf of California (Hazard, pers. comm. with CH2MHill). The primary mechanism through which IID's water conservation activities could result in take of California brown pelicans at the Salton Sea is a reduction in fish abundance.

Brown Pelican Conservation Measure 1 – Roost Site Creation

Reclamation, in cooperation with its conservation-agreement partners, will construct at least two roost sites for brown pelicans along the Southern California Coast. The objective of this conservation measure is to provide at least 2 major roost sites that in combination support roosting by at least 1,200 pelicans. The roosts will be sized to accommodate up to 1,000 pelicans each. A major roost site is defined as supporting at least 100 pelicans during June through October based on maximum counts. The roost sites are to be installed and functioning by 2018 and demonstrated to support at least 100 pelicans each and to support at least 1,200 pelicans in combination. They will be maintained through 2048.

The two required roosts will be located in South San Diego Bay and in the outer harbor of Santa Barbara unless future investigations determine installation of roost sites at these locations to be infeasible. A barge or similar structure will be anchored to create a roost site in the outer harbor in Santa Barbara. Large numbers of brown pelicans previously roosted on a barge in the outer harbor until the owner of the barge removed it (American Trader Trustee Council 2001). Thus, this measure would focus on restoring this roost site. The second roost site will be created in South San Diego Bay by installing one or more structures suitable for roosting pelicans and appropriate to the site-specific conditions in the bay. Few roost sites are present in the South San Diego Bay area which could limit use of this area by pelicans. Establishing a roost in this area could support

increased use by brown pelicans and also benefit juveniles dispersing from Mexico as they move along the coast.

The roost sites will be monitored annually for use by brown pelicans beginning one year after their installation (i.e., 2018). Monitoring will consist of monthly day and night roost surveys during June through October. Monitoring will be used to determine 1) if the created structures are serving as a major roost (i.e., more than 100 pelicans) and 2) if they are major roosts, are they, in combination, supporting at least 1,200 pelicans. Based on the five years of monitoring, a roost site will be considered a major roost if the maximum number observed was at least 100 pelicans during 3 out of 5 years. Similarly, if the two roost sites in combination support at least 1,200 pelicans during any of the 5 years based on maximum counts, the conservation measure will be considered successful. Because monitoring of the roosts will be initiated one year after they are installed, data will be available on an annual basis to allow an early assessment of whether the objective of supporting 1,200 pelicans is likely to be achieved with the initial two roosts or if additional roosts will need to be installed.

If a roost site does not support at least 100 pelicans, Reclamation and its conservation agreement partners will work with the Service and CDFG to modify the roost site to achieve the target. If modifications to the roost site are not likely to achieve the objective, Reclamation and its conservation agreement partners will work with the Service and CDFG to identify one or more locations to establish additional roosts sites as necessary to establish two major roosts. Similarly, if the two roosts in combination do not support at least 1,200 pelicans, Reclamation and its conservation agreement partners will work with the Service and CDFG to modify the roost sites or establish additional roost sites until at least two major roosts are established and all created major roosts combined support at least 1,200 pelicans by 2023. The Service and CDFG will consider the ongoing use of the Salton Sea by brown pelicans to determine if an extension of this date is appropriate. Attachment B summarizes information on locations along the Southern and Central California Coast where roost sites could be created or improved in the event that the initial two roosts do not achieve the objectives.

The roost sites will continue to be monitored annually after the initial five year effectiveness monitoring period. Reclamation and its conservation agreement partners will work with the Service and CDFG to develop an appropriate level of intensity for the monitoring. During the course of the proposed fish and wildlife conservation measures, the frequency for the monitoring may be reduced with approval from the Service and CDFG. If the monitoring data show a decline in use of a roost site by brown pelicans to a level below the target population (i.e., 1,200 pelicans) and the decline in use can be reasonably attributed to the characteristics or management of the roost site, then Reclamation and its conservation agreement partners will work with the Service and CDFG to identify and implement actions to re-establish conditions to support 1,200 pelicans.

Interrelated Actions

The IID, CVWD, and MWD negotiated the terms of the QSA. Although not a signatory to the proposed QSA, SDCWA is a member agency of MWD. SDCWA participated in the QSA negotiations and benefits or is impacted by certain of its terms. The QSA is a consensual transfer

of Colorado River entitlement based on a series of proposed agreements, which include water conservation/transfer and exchange projects among IID, CVWD, and MWD. The proposed QSA provides part of the mechanism for California to reduce its water diversions from the Colorado River in normal years to its apportioned amount of 4.4 MAF under the California Plan. The implementation of the proposed QSA, which includes water conservation and water transfers from agricultural use to principally urban use, would result in a net reduction of Colorado River diversions to California.

If the QSA is fully approved by the participating agencies and the conditions precedent to implementation of the QSA are satisfied or waived, SDCWA would be limited to the primary amount (130 to 200 thousand acre-feet/year (KAFY)) of transferred water under the IID/SDCWA Transfer Agreement. CVWD would have an option to acquire up to 100 KAFY, and MWD would have an option to acquire any portion of the 100 KAFY that CVWD elects not to acquire. The federal approvals required to implement water deliveries in accord with the QSA will be evidenced by the Secretary's execution of the Implementation Agreement.

The QSA also includes the allocation of conserved water to be generated by other projects that have been assessed in other final CEQA/NEPA documentation and/or section 7 consultations. The 1988 IID/MWD Agreement and subsequent agreements and modifications were the subject of a CEQA analysis that determined that the impacts of that project were not significant. There was no Federal action needed to carry out the requirements of these agreements, and all water conservation activities required as part of these agreements have been implemented. The construction projects required to line the All American and Coachella Canals have already undergone consultation. The MWD and the San Luis Rey Indian Tribes (as a result of a settlement agreement) will receive conserved water from these two projects. The consultation process for these two projects did not address receipt and use of the water by these entities on the coast, nor is it included here. The CVWD/MWD State Water Project Transfer/Colorado River Exchange is considered outside of this proposed action and is not addressed in this consultation. Other water caps and shortage sharing agreements included in the QSA also are not addressed in this analysis. This consultation is limited to the fish and wildlife conservation measures described above and the water conservation activities required of IID to implement the requirements of the IID/SDCWA Water Conservation and Transfer Agreement and the QSA (including capping their water use at 3.1 MAF/year). Receipt and use of the water by SDCWA, CVWD, and MWD is not addressed. SDCWA and MWD have stated that their use of the water will not result in additional impacts as it constitutes replacement for surplus water needed to meet existing needs (CH2MHill 2002, MWD 2000). CVWD has begun discussions with the Service and CDFG regarding addressing the impacts of their use of the water through participation in the Coachella Valley Multi-Species Habitat Conservation Plan or an independent HCP for the receiving area.

Potential IID Water Conservation Activities Resulting from Proposed QSA Water Transfers

Water conservation or other water use activities will be implemented by IID to conserve the water to be delivered pursuant to the QSA and the California Plan for the Colorado River. Implementation of water conservation activities would occur gradually, based on schedules defined in the QSA. Water conservation would likely be accomplished through a combination of on-farm

and system-based conservation methods. On-farm methods consist of actions taken by individual farmers or landowners to conserve water under voluntary water conservation agreements with IID. System-based conservation methods consist of actions that may be undertaken by IID to conserve water. The exact mix of conservation methods employed may vary over the life of the water transfer term and will be determined by IID. Because these activities are anticipated to have adverse effects to listed species that would otherwise be prohibited by the ESA, these activities could not be implemented but for the proposed fish and wildlife conservation measures described above and the resulting incidental take exemption provided herein. The following sections describe the suite of conservation methods that could be implemented by IID to develop water for transfer.

15-Year Minimization Plan

This plan requires that the transfer not materially affect the salinity of the Salton Sea during the first 15 years of the transfer. This has been required by the State of California and will result in impacts to Salton Sea species being minimized during that time. IID will deliver a total of 1.0 million acre-feet (MAF) to SDCWA over these first 15 years of the transfer. The volume will be ramped up at 10,000 acre-foot intervals, and IID will transfer a volume of 100,000 acre-feet in years 11 through 15 of the transfer. This volume will be achieved through fallowing and will require that 25,000 to 30,000 acres be fallowed during this period in order to deliver water to the SDCWA and the Salton Sea.

The transfer of water from IID to CVWD will commence in 2008. This water will be conserved through efficiency conservation, and the volume of water will be ramped up at a rate of 4,000 to 5,000 acre-feet/year (AFY). The total volume to be made available to CVWD during the first 15 years of the transfer is 240,000 acre-feet (AF). This conservation and transfer results in a reduction of inflows to the Salton Sea of 160,000 AF during the first 15 years. Given the difference in salinity between the baseline and this project is approximately 1 ppt in year 15, this was not considered a material effect to the Salton Sea.

MWD has offered to provide water generated by their transfer agreement with Palo Verde Irrigation District (PVID) in order to meet the requirement that the water conservation and transfer program not materially affect the Salton Sea salinity for 15 years. MWD will make up to 390,000 AF available to SDCWA over the first 15 years of the transfer on a schedule to be determined by MWD. This project was evaluated under a separate California Environmental Quality Act (CEQA) process, and PVID has determined that no take of listed species will occur in the Palo Verde Valley as a result of that project. Therefore, this project is not included as part of this consultation, and no take is authorized.

As part of the requirement to keep the Salton Sea from materially deviating from the baseline salinity, the water agencies are considering substituting drain water inflows with groundwater from the East Mesa area. The agreement allows for this to be pursued provided that it is accomplished at no cost to IID. In this case, IID would be able to increase its deliveries to SDCWA and reduce the fallowing requirement. The use of groundwater from East Mesa has not been evaluated and will require additional environmental compliance prior to its implementation. This action is not included in the current consultation process.

On-Farm Water Use and Conservation

The conservation of up to 300 KAFY of water in the IID service area will require changes in current farming practices and may result in substantial capital investments in water conservation equipment and technologies. Farmers may voluntarily enter into agreements with IID, thereby committing to the implementation of water conservation activities. These activities would require farmers to make capital investments in various types of water conservation equipment and facilities. In many cases, farmers will be required to obtain financing for construction costs to implement and maintain conservation equipment. The farmers' ability to obtain financing will depend on the estimate of the direct and indirect costs of implementing water conservation activities.

Many farmers own land in the IID service area. Some lease their land from third parties, and others lease their land from IID. This biological/conference opinion includes potential impacts from water conservation activities on land in the IID service area, regardless of who owns the land and who conducts the activities. The options for conserving water that are available to farmers generally fall into these categories:

1. Installation of structural or facility improvements, or conversion to irrigation systems that increase efficiency and reduce water losses
2. Irrigation management
3. Land use practices

Installation of Structures/Facilities and Conversion of Irrigation Systems

On-farm water conservation can be achieved through various techniques using existing technology. On-farm water conservation activities may include:

- Tailwater return systems
- Cascading tailwater systems
- Level basins
- Shorten furrows and border strip improvements
- Narrow border strips
- Cutbacks
- Laser leveling
- Multi-slope
- Drip irrigation

The techniques for achieving water conservation would be at the discretion of the individual farmer. It is expected that some combination of the techniques listed would be employed.

Irrigation Management

Certain farmers may be able to conserve water and cultivate the same acreage through better irrigation management without constructing facilities or changing irrigation methods. Irrigation management refers to controlling the timing and amount of each irrigation application to provide adequate crop water for maximum yield and to achieve adequate soil leaching. On-farm irrigation management will continue to evolve as the science of crop/soil water develops and as farmers understand irrigation management better and increase their practical use of it. As greater demands are put on agricultural areas to conserve more water in California, irrigation water management will become a more important tool for farmers.

Land Use Practices

Fallowing can be described as the reduction or cessation of certain farmland operations for a specified or indefinite period of time. For this analysis, fallowing is defined as:

- Long-term land retirement (greater than 1 year), whereby crop production ceases indefinitely or during the term of the water conservation and transfer agreements. A cover crop may be maintained during the period of inactivity, or the land may be returned to natural vegetation.
- Rotational fallowing, whereby crop production ceases for 1 calendar year. No water is applied, and no cover crop is grown.
- Single crop fallowing, whereby multiple crops are reduced to a single crop rotation on an annual or longer term basis.

IID's Board of Directors adopted Resolution No. 5-96, stating that IID will not support fallowing programs for purposes of transferring water. However, there is no prohibition of fallowing under the terms of the QSA. Fallowing may be considered a potentially viable method to achieve water conservation in IID's service area. IID will not pay farmers to change crops in order to reduce water use (John Eckhardt, formerly of IID, pers. comm.). It is their position that market forces, not water use, will continue to drive crop choice in the Imperial Valley.

System-Based Water Conservation Activities

As part of IID's water conservation and transfer programs, IID may choose to implement operational and structural improvements to conserve water by preventing unnecessary losses from the delivery system. The specific improvements that would be undertaken are uncertain; however, the types of improvements that IID could pursue include the following:

- Installing additional lining in canals and laterals
- Replacing existing canal linings as normal maintenance to prevent leakage
- Automating flow control structures
- Installing check gates in the laterals that are automated or manually operated
- Installing non-leak gates
- Installing additional lateral interceptors

- Installing additional pipelines
- Installing additional reservoirs, including small, mid-lateral reservoirs to provide temporary water storage and increase delivery efficiency
- Developing water reclamation systems
- Installing pump or gravity-operated seepage recovery systems

Canal Lining and Piping

Canal lining consists of lining canals with concrete or using pipelines to reduce seepage. About 537 miles of canals are currently unlined. To line a canal, the existing canal is filled in and then trenched to form a trapezoidal channel. Concrete is then installed on the banks and bottom of the channel using a lining float. Construction activities can be conducted in the canal's right-of-way and impact an area about 70 feet wide centered on the canal. The canal rights-of-way consist of either roads, embankments, or other disturbed ground. About 1 week is required to line a mile of canal. A component of the conservation activities proposed under the IID /SDCWA Transfer Agreement included lining in three canal sections in the IID service area totaling about 1.74 miles.

Lateral Interceptors

A lateral interceptor system consists of new canals and reservoirs that collect operational spills from lateral canals. Lateral interceptors are lined canals or pipelines that generally run perpendicular to lateral canals at their terminus. The lateral interceptors capture operational spill water, unused water resulting from canal fluctuations, and return water from farmer delivery reductions or changes. The interceptors convey this captured water to regulating reservoirs, where the water can be stored and reused in another canal serving another delivery system as needed. IID has four systems in operation and potentially could enlarge or expand system capacity in response to the need to conserve water for transfer.

Installation of a lateral interceptor requires constructing and lining a canal, installing pipelines, and constructing a minimum 40-acre surface reservoir. An approximately 70-foot-wide area centered on the new interceptor would be impacted by the construction. The impacted area of the reservoir site would be only slightly larger than the reservoir itself. A component of the conservation activities proposed under the IID /SDCWA Transfer Agreement included installation of up to 16 lateral interceptors. The total acreage potentially impacted by construction of lateral interceptors could be about 1,480 acres (i.e., approximately 840 acres of canals and 640 acres of reservoir).

Reservoirs

Two types of reservoirs can facilitate water conservation: operational reservoirs (includes mid-lateral reservoirs) and interceptor reservoirs. Operational reservoirs are generally placed in locations to take advantage of delivery system supply and demand needs and, in some cases, include locations of historical canal spills. These reservoirs are used to regulate canal flows to match or optimize demand flows to supply flows. Conservation is achieved by reducing operational spills as a result of this mismatch of flows by storing excess supply water and then releasing this water in order to meet demand needs.

Interceptor reservoirs enhance lateral interceptor system operations. They are typically placed at the end of the lateral interceptor canals to store intercepted flows (operational discharges) for re-regulation rather than losing these flows to the drainage system. These stored flows are later released for use in other delivery system canals to meet water demand. These reservoirs would contain automated inlet and outlet structures that would enable the maintenance of the desired water flow. IID currently does not have any reservoirs in design, but could choose to construct these facilities in response to a 300 KAFY reduction in water delivery. Reservoirs would likely be 1 to 10 acres in size, with a capacity ranging from about 5 to 30 AF. It is assumed that construction of these reservoirs could encompass up to 1,000 acres total.

In addition to reservoirs constructed and operated by IID, farmers in the Imperial Valley may construct small regulating reservoirs to facilitate the conservation of water. These 1- to 2-acre reservoirs would be constructed at the upper end of agricultural fields and used to better regulate irrigation water applied to fields and to settle suspended solids prior to introduction into drip irrigation systems. These reservoirs would contain water only during irrigation operations, remaining dry during the remainder of the year. IID anticipates that these reservoirs could be used on up to 50 percent of the agricultural land in its service area. A single reservoir services about 80 acres of land. Up to about 5,900 acres of agricultural land could be converted to regulating reservoirs valley-wide.

Seepage Recovery Systems

To conserve water, IID could install seepage recovery systems adjacent to the East Highline Canal. Surface and subsurface recovery systems conserve water by collecting canal leakage in sumps along a canal and pumping the water back into the same canal.

In a surface drain recovery system, seepage is captured and conveyed through open channels to a concrete sump. From there, it is pumped back into the canal. Construction required to install a surface recovery system is minimal. For a surface recovery system, a small check structure would be constructed in the existing parallel drain to pond water to a depth of about 3 feet. A pump station would return water to the East Highline Canal. These systems are appropriate in locations where there is an existing drain that collects seepage and directs water to the drainage system.

In a subsurface recovery system, canal seepage flows are collected in a perforated pipe that directs the water to a concrete sump. From there, it is pumped back into a canal. Subsurface systems are proposed in areas lacking an existing parallel open drain. To install these systems, a trench is excavated, and a pipe is laid in place. The pipeline outlets to a collection well consisting of an 8-foot-diameter vertical pipe from which the water is pumped back to the delivery canal. Construction disturbs an area about 70 feet wide along the pipeline. Following completion of the system, a right-of-way of about 70 feet along the pipeline would need to be kept free of deep-rooted vegetation.

Operations and Maintenance Activities Conducted By IID

These actions are outside Reclamation's proposed action and are not interrelated to the fish and wildlife conservation measures. Operations and maintenance activities in and along the drains, canals, and other facilities operated by IID are ongoing and would be necessary with or without the water conservation and transfer program, with the exception of the maintenance of the canal linings, lateral interceptors, mid-lateral reservoirs, and seepage recovery systems installed as part of the program. Because these new facilities are expected to be located in areas not used by listed species or maintained in a condition that does not provide habitat for listed species, impacts to listed species from these operation and maintenance activities are not expected. The conditions that result from maintenance activities associated with existing facilities are considered to be part of the baseline and are not addressed in this consultation process.

Action Area

This biological opinion includes lands comprising the approximately 500,000 acres of IID's water service area in Imperial County, California, the Salton Sea (including lands owned by IID outside of its water service area that are currently submerged by the Salton Sea), and areas of the Coachella Valley that are adjacent to the Salton Sea. This area is illustrated on Figures 1-1 (IID) and 1-2 (Salton Sea). The Action Area also includes the lower Colorado River valley and the coastal California range of wintering California brown pelicans. Measures included in the willow flycatcher and the rail conservation packages may include habitat replacement along the lower Colorado River. Brown pelican conservation measures include enhancements of habitat on the coast to offset losses occurring at the Salton Sea.

STATUS OF THE SPECIES

Desert Pupfish

The desert pupfish is the largest of the North American pupfish. Although they may reach 3 inches (7.6 centimeters) in length, they are seldom more than half that size. They have a smoothly rounded body shape and narrow, vertical dark bars on the sides (Schoenherr 1992). Breeding males are blue on the tops and sides, and have yellow to orange fins. Females and juveniles have tan to olive colored backs and silvery sides. Pupfish typically occupy the shallow waters of springs, small streams and marshes. Desert pupfish are adapted to harsh desert environments and capable of surviving extreme environmental conditions (Moyle 1976; Lowe *et al.* 1967). Although desert pupfish are extremely hardy in many respects, they prefer quiet water with aquatic vegetation (Schoenherr 1992), and they cannot tolerate competition or predation and are thus displaced by exotic fishes (USFWS 1986).

Tolerance for environmental extremes is a notable feature of the desert pupfish. This is important because desert habitats experience wide variations in temperature, salinity, and dissolved oxygen. The critical thermal maximum of 44°C for this species is the highest ever recorded for a species of fish. This ability to tolerate hot water also enables them to live in hot springs. In such a habitat, the desert pupfish may feed on blue-green algae that live in water hotter than its critical thermal

maximum. Also recorded for the desert pupfish is the lowest tolerated minimum for dissolved oxygen, at 0.13 mg/l. The species' range of tolerance for salinity is also high. Adult desert pupfish tolerate water from distilled to 70 g/l (twice the concentration of seawater) (Schoenherr 1992). Barlow (1958) reported that adult desert pupfish survived salinity as high as 98,100 mg/L in the laboratory.

Desert pupfish are opportunistic feeders. Their diet, which varies seasonally with food availability, consists of algae, minute organisms associated with detritus, insects, fish eggs, and small crustaceans (Cox 1972; Naiman 1979). In the Salton Sea, ostracods, copepods, and occasionally insects and pile worms are taken (Moyle 1976). Adults are not considered food for piscivorous birds or fish because of their sparse density (Walker *et al.* 1961; Barlow 1961).

The historic range once extended from the Gila River tributaries in southern Arizona and northern Sonora, westward to the Salton Sea area and southward into the Colorado River delta region in Sonora and Baja California, Mexico (Minckley 1980; Miller 1948; Miller and Fiuman 1987). It also formerly occurred in the slow-moving reaches of some large rivers, including the Colorado, Gila, San Pedro, Salt, and Santa Cruz Rivers. Where suitable habitat was available, desert pupfish probably occurred in the Agua Fria, Hassayampa, and Verde Rivers of Arizona as well. Distribution of desert pupfish was widespread, but probably not continuous within its historic range (CH2MHill 2002).

Currently, this species is known from only a few locations in California and Mexico. The only remaining natural populations are found in a few sites in the Salton Sea drainage, and the Colorado River Delta in Baja California and Sonora, Mexico. Specifically, it is found in San Felipe Creek and its associated wetlands in Imperial County and Salt Creek in Riverside County, both Salton Sea tributaries (Nicol *et al.* 1991), more than fifty localities in drains and shoreline pools on the southern and eastern margins of the Salton Sea (Lau and Boehm 1991), and in small pools in the upper Coachella Valley. Sutton (1999) observed desert pupfish movement between the Salton Sea and nearby drains. Pupfish were observed moving from both irrigation drains and Salt Creek downstream into shoreline pools. The reverse movement from shoreline pools upstream into both drains and Salt Creek was also observed. Decreases in the size of shoreline pools during seasonal fluctuations in water levels may affect fish health and/or force pupfish to seek other habitat. Thus, the connectivity between habitat types may be necessary to prevent pupfish from becoming stranded in habitats that cannot sustain them for prolonged periods (Sutton 1999). These observations indicate the importance of agricultural drains as pupfish habitat and the potential for pupfish to use shoreline aquatic habitats as corridors. This potential movement may be important in providing genetic mixing between various populations.

Specifically, desert pupfish prefer backwater areas, springs, streams, and pools along the shoreline of the Salton Sea. Desert pupfish habitat occurs in pools formed by barnacle bars located in shoreline areas of the Salton Sea and in Salt Creek. Barnacle bars are deposits of barnacle shells on beaches, shoreline areas, and at the mouths of drains that discharge to the Salton Sea. The bars form pools that provide habitat for desert pupfish (IID 1994). Habitat for desert pupfish also occurs in the mouths of drains discharging directly to the Salton Sea, in San Felipe Creek, and in Salt Creek.

Spawning at the Salton Sea takes place between late March and late September when water temperatures exceed 20° C (Moyle 1976; UCLA 1983). Pupfish can spawn several times during this period. Adult male desert pupfish are very territorial during the spawning season such that schools consist either entirely of adult females or entirely of juveniles. Desert pupfish usually set up territories in water less than 1 m (3 feet) deep and associated with structure (Barlow 1961). Territoriality is highest in locations with large amounts of habitat, high productivity, high population densities, and limited spawning substrate (USFWS 1993). Desert pupfish prefer water 18 to 22 centimeters (cm) deep for egg deposition (Courtois and Hino 1979). Depending on size, a female pupfish may lay 50 to 800 eggs or more during a season (Crear and Haydock 1971). The eggs hatch in 10 days at 20° C, and the larvae start feeding on small invertebrates within a day after hatching (Crear and Haydock 1971). Larvae are frequently found in shallow water where environmental conditions are severe.

Although remarkably tolerant of extreme environmental conditions, the desert pupfish is threatened throughout its native range primarily because of habitat loss or modification, pollution, and introductions of exotic fishes (USFWS 1986). Improper grazing can increase turbidity by increasing erosion and reducing riparian vegetation. Water pollution from the application of pesticides in proximity to desert pupfish habitat is also an important factor, contributing to the decline of the Quitobaquito subspecies (Miller and Fuiman 1987). Droughts can cause the springs and headwaters that this species inhabits to dry up. Water development projects can degrade desert pupfish habitat by removing water through groundwater pumping, diversion, and irrigation. The reduction of the amount of water in these habitats can create situations where the desert pupfish are at a competitive disadvantage with exotic fish species.

Currently, there are two recognized subspecies of the desert pupfish, *Cyprinodon macularius macularius* and *C.m. eremus*. Both subspecies were included in the federal listing of the desert pupfish as endangered on March 31, 1986 (51 FR 10842, USFWS 1986). The population is defined as occurring in Quitobaquito Springs, Arizona; Salton Sink, California; El Doctor, Laguna Salada, and Cerro Prieto in Baja California, Mexico; and Rio Sonoyta in Sonora, Mexico (58 FR 6526, USFWS 1993). Only the *C.m. macularius* subspecies occurs in the proposed project area. In California the San Felipe Creek system, including San Sebastian Marsh, and Salt Creek provide natural habitat for desert pupfish populations.

Recently, Echelle *et al.* (2000) used mitochondrial DNA variation to describe the genetic structure of *C. macularis*, which represents two evolutionarily divergent entities that should be recognized as two monophyletic groups: Rio Sonoyta/Quitobaquito and Salton Sea/Colorado River Delta. Although the same haplotype was common throughout both the Salton Sea and Colorado River Delta regions, the distribution of less common haplotypes indicates a lack of wholesale intermixing. A conservative management approach would avoid intermixing pupfish between these two regions beyond what occurs naturally. Although the Salton Sea and Colorado River Delta revealed no significant differences among paired samples within and between the two regions, they also shared no haplotypes with samples from the Rio Sonoyta/Quitobaquito regions. This suggests long, mutually exclusive evolutionary histories (Neigel and Avise 1986) for the two monophyletic groups, a hypothesis that is consistent with geological history. Although there were relative uncommon haplotypes found in the Salton Sea and Colorado River Delta region, there were no

unique haplotypes to just the Salton Sea region. This is probably attributable to recent gene flow occurring between the Salton Sea and Colorado River Delta region due to population expansion and dispersal with alternating population declines, isolation, and extinctions (Dunham and Minckley 1998). The low level of diversity exhibited by the two regions could also be attributable to a bottleneck effect or founder event. More recent separation of the Rio Sonoyta and Quitobaquito Springs populations would explain the lack of significant difference in haplotype frequencies between samples from these two areas. However, Echelle *et al.* (2000) recommends conservative management with no artificial intermixing of the populations for the Rio Sonoyta and Quitobaquito regions.

Critical habitat has been designated for this species at San Felipe Creek and two of its tributaries, Carrizo Wash and Fish Creek Wash [50 CFR 17.95 (e), USFWS 1986]. A total of approximately 770 acres of critical habitat has been designated. A draft recovery plan issued on January 29, 1993 (58 FR 6526, USFWS 1993) includes 3 goals to aid in the recovery of the desert pupfish: 1) secure, maintain (including habitat and water rights), and replicate all extant natural populations ; 2) acquire additional natural habitats; and 3) to establish replicates in the most natural habitats within the probable historic range. Further objectives include determination of habitat and biological criteria, acquisition of life history information, development and implementation of genetic protocol, population monitoring, and information and education. In the Salton Trough, this species would benefit from a reduction in the populations of exotic fish species that compete with or prey upon the desert pupfish. Efforts are ongoing by CDFG to maintain pupfish habitats in San Felipe and Salt Creeks free of exotic fish species. Control of exotic fish in the drains is not likely possible, but conditions that favor pupfish over the exotic species (shallow depths in particular) could be targeted to reduce the impacts of exotic fish species on desert pupfish in the drains. CDFG and the Bureau of Land Management have been implementing measures that reduce tamarisk stands around San Felipe and Salt Creeks to maintain adequate flows for desert pupfish in these areas. This is an ongoing need.

Yuma Clapper Rail

The Yuma clapper rail is the size of a crow, with long, gray-brown legs and toes. The orange bill is long, thin, and slightly down-curved. The head, neck, and breast are gray-brown, and the back feathers are darker brown with gray centers. Both the flanks and the undertail covert feathers are distinctly marked with alternate black and white bars. Males and females are similar in plumage coloration. Compared with the other dozen or so described subspecies, its plumage is less richly colored (paler, with more olive and gray tones) and its bill more slender (Dickey 1923). The body is laterally compressed, the tail and wings are noticeably short, and legs are large and strong, all adaptations that allow birds to run through dense weeds or swim underwater to avoid danger.

Yuma clapper rail habitat is characterized by cattail (*Typha*), bulrush (*Scirpus*), or tule stands, and shallow, slow-moving water near high ground. Cattail and bulrush stands are often dissected by narrow channels of flowing water that may be covered by downed vegetation. These open channels are important for foraging. Rails commonly use areas with low stem densities and little residual vegetation. They are also found in the ecotone between emergent vegetation and higher ground, such as the shoreline, channel edge, or hummocks in a marsh. In studies conducted along

the lower Colorado River, rails were found to use areas far from a vegetative edge during early winter (Conway *et al.* 1993). The depth of water used by clapper rails also varied with season, with shallower water used during the breeding season, and water of moderate depth used during the winter. Although clapper rails are often found in larger stands of vegetation, they have also been found to use patches of habitat within agricultural drains (Bennett and Ohmart 1978).

Clapper rails prey upon a variety of small invertebrate and fish species that inhabit marshy areas. The Yuma clapper rail has a diverse diet. It has been documented to feed on a variety of invertebrates and some vegetation. Included in its diet are crayfish, fresh water prawns, weevils, isopods, clams, water beetles, leeches, damselfly nymphs, small fish, tadpoles, seeds, and twigs. Based on the available information, crayfish of the genera *Procambarus* and *Oropectus* appear to make up the majority of its food intake along the Colorado River (Ohmart and Tomlinson 1977). Similar crustaceans are taken at the Salton Sea, and the abundance of these animals may be a better predictor of rail population densities than vegetation (Anderson and Ohmart 1985; Patten *et al.*, in press). Reported rail densities vary widely. Bennett and Ohmart (1978) reported rail densities in the Imperial Valley of 0.9 to 6.3 rails/10 hectares (3.9 to 27.4 acres/rail). Todd (1986) reported range size in Mittry Lake averaged 2.5 acres/rail (5.0 acres/pair). In that same study Todd determined that the range size along the Gila River was 0.3 to 9.0 acres. Anderson and Ohmart (1985) reported a home range size of 18.5 acres/pair.

The Yuma clapper rail is one of seven clapper rail (*Rallus longirostris*) subspecies presently recognized in the western United States and the Pacific Coast of Mexico (American Ornithologists Union 1957), and it is one of three subspecies of federally endangered western clapper rail populations. It occurs primarily in the lower Colorado River Valley in California, Arizona, and Mexico and is a fairly common summer resident from Topock south to Yuma in the U.S. and at the Colorado River Delta in Mexico. There are also populations of this subspecies at the Salton Sea in California, and along the Gila and Salt Rivers to Picacho Reservoir and Blue Point in central Arizona (Rosenberg *et al.* 1991). In recent years, individual clapper rails have been heard at Laughlin Bay and Las Vegas Wash in southern Nevada (NDOW 1998). Population centers for this subspecies include Imperial Wildlife Management Area (Wister Unit), Sonny Bono Salton Sea NWR, Imperial NWR, Cibola NWR, Mittry Lake, West Pond, Bill Williams Delta, Topock Gorge, and Topock Marsh. The USFWS (1983) estimated a total of 1,700 to 2,000 individuals throughout the range of the subspecies. Between 1990 and 1999, call counts conducted throughout the subspecies range in the U.S. have recorded 600 to 1,000 individuals. In 1985, Anderson and Ohmart (1985) estimated a population size of 750 birds along the Colorado River north of the international boundary. A substantial population of Yuma clapper rails exists in the Colorado River Delta in Mexico. Eddleman (1989) estimated that 450 to 970 rails inhabited this area in 1987. Piest and Campoy (1998) reported a total of 240 birds responding to taped calls in the Cienega de Santa Clara region of the Delta. These counts are only estimates of the minimum number of birds present. The population is probably higher than these counts show, since up to 40 percent of the birds may not respond in call surveys (Piest and Campoy 1998). Based on the call count surveys, the population of Yuma clapper rails in the U.S. appears stable (USFWS unpublished data). The range of the Yuma clapper rail has been expanding over the past 25 years, and the population may be increasing (Ohmart and Smith 1973; Monson and Phillips 1981; Rosenberg *et al.* 1991; McKernan and Braden 1999). A recent genetic analysis showed that this

subspecies is outbred; population numbers of the Yuma clapper rail have not become low enough to reduce genetic diversity (Bureau of Land Management 2001).

The Yuma clapper rail breeds from March to July in marshes along the Colorado River from the Nevada/California border south to the Colorado River Delta region in Mexico. Chicks generally fledge by mid-September (Eddleman and Conway 1998). It builds its nest on a raised platform of vegetation concealed in dense marsh vegetation (Patten *et al.*, in press). Males may build multiple nests, and the female chooses one for egg-laying. Alternate nests are used as platforms for loafing, preening, and as brood platforms, but may also be useful for incubation if predators or high water disturb the primary nest (Eddleman and Conway 1994). Populations of this species occur in the Palo Verde and Imperial valleys. This subspecies is partially migratory, with many birds wintering in brackish marshes along the Gulf of California but some remain on their breeding grounds throughout the year (Bureau of Land Management 2001). Yuma clapper rails are found around the Salton Sea, and in agricultural drains and canals that support marsh vegetation (i.e., cattail, giant bulrush, alkali bulrush, and common reed). This subspecies breeds only in the lower Colorado River Valley and in the Salton Sink, the latter area holding about 40% of the United States population (Setmire *et al.* 1990). The breeding site for the largest population of the Yuma clapper rail in the United States is at the Wister unit of the CDFG Imperial Wildlife Area, near the Salton Sea. The sea's elevation is important to the Yuma clapper rail (USDOI 1998) as clapper rails use shallow freshwater habitat that has formed at the mouths of many of the inflows to the Salton Sea. Yuma clapper rails avoid deeper water because it increases juvenile mortality (CDFG 1990).

The Yuma clapper rail apparently expanded its range in the early 1900's in response to changes in the vegetation along the Colorado River. Damming and associated changes in hydrology induced vegetation changes in some areas that favored rails. At the same time, damming and diversion of the Colorado River reduced the amount of water flowing into the Colorado River Delta, and reduced the availability of rail habitats in the Delta. Approximately two-thirds of the formerly extensive marshlands of the Delta disappeared following completion of Hoover Dam (Sykes 1937).

Yuma clapper rail habitat has been further affected by channelization, fill, dredging projects, bank stabilization, and water management practices along the Colorado River. Three Fingers Lake and Davis Lake were lost as Yuma clapper rail habitat from river channelization (USFWS 1983), but recently may have been reconnected to the river (Leslie Fitzpatrick, USFWS, pers. comm.). Cibola Lake experienced marsh destruction when channelization work was completed for that stretch of the river, but it has been subject to ongoing restoration efforts (Lesley Fitzpatrick, USFWS, pers. comm.). Rail habitat has also been adversely affected by the spread of salt cedar (*Tamarisk ramosissima*). Salt cedar consumes an unusually high amount of water, which results in reduced wetland areas for vegetation preferred by the rail.

Another threat to the Yuma clapper rail is environmental contamination due to selenium. High selenium levels have been documented in crayfish, a primary prey of clapper rails, and some adult birds and eggs. Other threats to the Yuma clapper rail include mosquito abatement activities, agricultural activities, development, and the displacement of native habitats by exotic vegetation (CDFG 1991). The population of Yuma clapper rails at the Cienega de Santa Clara is threatened by the loss of the source of water that maintains the wetland habitat.

On March 11, 1967, the Service determined the Yuma clapper rail to be an endangered species (32 FR 4001, USFWS 1967). The State of California added the bird to its list of rare wildlife in May of 1971 and later listed it as threatened on February 22, 1978 (USFWS 1983). The Yuma Clapper Rail Recovery Plan, approved in 1983, provides background information on the species and identifies new or ongoing tasks necessary to achieve recovery of this species. This includes the long-term preservation of habitat in breeding and wintering areas of the United States and Mexico, and maintenance of suitable flows throughout the lower Colorado River. Many of the currently occupied breeding sites in the United States are on State and Federal lands that are protected and managed for wildlife. However, adequate water supplies are needed to assure the long-term availability of this habitat. Wintering areas and needs are not well known and require further study before habitat preservation needs can be determined. Many of the Mexican breeding sites are located in the Rio Colorado Delta area and require adequate flows in the lower Colorado River for long-term use by Yuma clapper rails.

California Black Rail

The black rail is the smallest of the North American rails. The adults are pale to blackish gray with white streaking on the undertail covers and flanks and a short, black bill. The nape and upper back are chestnut in color. The California subspecies is smaller and brighter than the Eastern black rail (*L. j. jamaicensis*; Eddleman *et al.* 1994). The California black rail is a secretive rail. Unlike other rails, the black rail is most vocal in the middle of the night.

The California black rail's diet consists mostly of insects, but also includes some crustaceans, and seeds of aquatic vegetation. Flores and Eddleman (1991) studied black rail diets and food availability at Mittry Lake and found that black rails consume a wide variety of invertebrates throughout the year, including beetles, earwigs, ants, grasshoppers, and snails. When invertebrate availability drops during the winter months, a larger portion of cattail and bulrush seeds is consumed. Lower resource availability in winter causes black rails to experience a significant weight loss, indicating they are more vulnerable to stress during this time. The California black rail forages by ground gleaning (Scott 1987; Ehrlich *et al.* 1988).

The California black rail inhabits fresh, brackish, and salt water marshes, occasionally wet savannah, and rarely dry grassland. Preferred habitat of the California black rail is characterized by minimal water fluctuations that provide moist surfaces or very shallow water, gently sloping shorelines, and dense stands of marsh vegetation (Repking and Ohmart 1977). Studies conducted along the lower Colorado River suggest that habitat structure and water depths are more important factors than plant composition in determining black rail use of wetland habitats. Unsuitable water and structural conditions appear to restrict the California black rail to only a fraction of the emergent vegetation available within an entire wetland (Flores and Eddleman 1991). In general, Flores and Eddleman (1991) found that black rails used marsh habitats with high stem densities and overhead coverage that were drier and closer to upland vegetation than randomly selected sites. Marsh edges with water less than 1 inch deep dominated by California bulrush and three-square bulrush are used most frequently. Areas dominated by cattail are also used regularly, but only in a small proportion to their availability and generally within 165 feet of upland vegetation where water depth is 1.2 inches. Telemetry studies at Mittry Lake found black rails to be sedentary, with home

ranges averaging 1.2 acres or less (Flores and Eddleman 1991). The erratic movements recorded for some juvenile and unmated birds during this research were consistent with the "wandering" behavior attributed to this subspecies and supports the idea that black rails may be capable of quickly occupying newly created habitats (Flores and Eddleman 1991).

Nesting biology of the California black rail is poorly understood. Double clutching and re-nesting may be fairly common in this subspecies. Both sexes assist in incubation and brood rearing, suggesting the species is monogamous, but the duration of its pair bond and variations in its mating system are still unstudied (Eddleman *et al.* 1994). These behaviors, combined with a relatively large clutch size, long breeding season, apparently low predation rates, and aggressive nest defense, suggest that the black rail has a high reproductive potential that is likely limited by the availability of shallow water environments (Eddleman *et al.* 1994; Flores and Eddleman 1991).

The California black rail occurs in the lower Colorado River area from the Imperial Dam, south to the Mexican border, with smaller, isolated populations scattered along the California coast from San Luis Obispo to San Diego Counties. It also occurs in the San Bernardino/Riverside area and at the Salton Sea (CDFG 1991). Along the lower Colorado River, the California black rail is a permanent resident in the vicinity of Imperial Dam and Bill Williams Delta (Snider 1969, Repking and Ohmart 1977). Black rails are also thought to breed in Cienega de Santa Clara, one of the only three breeding localities for this species in Mexico and one of the few for the subspecies anywhere (Piest and Campoy 1998).

In the proposed project area, appropriate habitats are found primarily in the managed wetlands on the state and federal wildlife refuges, in wetland areas adjacent to the Salton Sea, and in marsh habitats supported by seepage from the All American Canal and adjacent to the East Highline Canal, Finney Lake, and Salt Creek (Garrett and Dunn 1981). Black rails may use agricultural drains in the valley, although they have not been found to make extensive use of agricultural drains in previous surveys. Vegetation along agricultural drains mainly consists of common reed and tamarisk, species that are not generally used by black rails. Areas of cattails and bulrushes do exist along the drains. However, these areas are small and narrow and often interspersed with other vegetation, such as common reed. The habitat value of marsh vegetation supported by agricultural drains is probably limited and may only support foraging by black rails. The value of the drains to California black rails is also likely to be limited by their frequent water fluctuations, varying depths, and steep side slopes.

The North American population of black rails has very small and discontinuous ranges restricted largely to the United States. California black rail populations declined substantially between the 1920s and 1970s due to the loss and degradation of coastal salt marsh and inland freshwater marsh habitats (Eddleman *et al.* 1994, CDFG 1991). Along the lower Colorado River, black rail populations declined an estimated 30 percent between 1973 and 1989, with the majority of birds shifting from north of Imperial Dam to Mittry Lake during the same period (Eddleman *et al.* 1994). The effect of selenium in the lower Colorado River on black rails remains unknown, but toxic levels of this contaminant may also threaten black rail populations in the action area (AGFD 1996, Eddleman *et al.* 1994, Flores and Eddleman 1991). The lower Colorado River population and the small population in the Salton Sea area represent the only stable populations of this subspecies

(Eddleman *et al.* 1994, Rosenberg *et al.* 1991). The California black rail was listed as threatened by the State of California in 1971 (USFWS 1994, 1996).

California Brown Pelican

Brown pelicans (*Pelicanus occidentalis*) are recognized by their large size, impressive wingspan (up to 2 meters), short legs, distinctive long, hooked bill, and flexible lower mandible from which the highly expandable gular pouch is suspended. Six subspecies of brown pelicans have been described where the geographic variation in size is the primary distinguishing feature (Wetmore 1945). Unlike other brown pelican subspecies, the California brown pelican typically has a bright red gular pouch (the basal portion) that contrasts with its dark neck and is most visible during the courtship and egg-laying period (USFWS 1983).

The California brown pelican is found in marine habitats which range from the open ocean to inshore waters, estuaries, bays, and harbors. Pelicans commonly use undisturbed beaches, breakwaters, and jetties near coastal bays as roosting areas and forage nearby. They breed on specific offshore islands of southern California and northwestern Baja California, Mexico. Nesting colonies can be found on the Channel Islands, the Coronado Islands, and on the islands in the Gulf of California (Garrett and Dunn 1981). Brown pelicans are colonial nesters, and breeding is typically initiated in late December or early January. The nest is a small mound of sticks or debris on rocky, or low, brushy slopes of undisturbed islands (Cogswell 1977), usually on the ground and less often on bushes (Palmer 1962). After breeding, they begin migrating as early as mid-May. Individuals leave colonies in the Channel Islands and in Mexico and disperse along the entire California coast. During the nesting season, they generally stay within 20 kilometers of nesting islands (Briggs *et al.* 1981). Brown pelicans lay eggs from March to April, but records have indicated egg laying even as late as June (Palmer 1962). Clutch size is usually 3 eggs, sometimes 2 with a single brood each year. Incubation lasts about 4 weeks. Young are altricial and cared for by both parents, but they fledge at about 9 weeks. Brown pelicans first breed at about 3-5 years of age.

Brown pelicans are diurnal and active throughout the year. In California brown pelicans feed primarily on northern anchovy, Pacific sardine, and Pacific mackerel (Thelander and Crabtree 1994). Brown pelicans generally forage in early morning or late afternoon, or when the tide is rising. They feed almost entirely on fish, caught by diving from 6-12 meters in the air, and occasionally from up to 12 meters. They may completely or partially submerge, and water may be shallow or deep. Occasionally brown pelicans will feed on crustaceans, carrion, and young of its own species (Palmer 1962). They usually rest on water or inaccessible rocks (either offshore or on mainland), but will also use mudflats, sandy beaches, wharfs, and jetties. They do not roost overnight on water, rather they concentrate at a few traditional roosts on the mainland or islands (Briggs *et al.* 1981). They cannot remain on the water for more than one hour without becoming water-logged, and they require undisturbed roosts where they can dry and maintain their plumage during the day and at night (Schreiber and Schreiber 1982). Schreiber and Schreiber (1982) identified the need for this species to have year round access to undisturbed loafing and roosting sites in proximity to foraging areas. This need was reinforced in the Recovery Plan for this species (USFWS 1983) that identified roosting and loafing areas as essential habitat.

The current breeding distribution of the brown pelican ranges from the Channel Islands off southern California southward (including the Baja California coast and the Gulf of California) to Isla Isabella, and Islas Tres Marias off Nayarit, Mexico, and Isla Ixtapa off Guerrero, Mexico. About 45,000 pairs nest on Mexico's west coast (Ehrlich *et al.* 1992) including approximately 35,000 pairs in the Gulf of California (David Pereksta, USFWS, pers. comm. 2002), and this population is considered stable at this time (Dan Anderson, University of California at Davis, pers. comm.). Between breeding seasons, brown pelicans may range as far north as Vancouver Island, British Columbia and south to Central America. As plunge divers, they require relatively clear water to visually locate their prey from on the wing. The largest numbers of brown pelicans (most of which derive from Mexican colonies) appear in California during late summer and fall. Year-to-year post-breeding dispersal patterns of brown pelicans are, however, largely determined by the oceanographic conditions which influence anchovy availability.

The brown pelican is a common post-breeding visitor to the Salton Sea, with numbers steadily increasing over the past decades from the first records beginning in the early 1950s (Patten *et al.*, in press). This species does not occur elsewhere inland in such numbers or with such regularity. In fact, the brown pelican colony closest to the Salton Sea is about 220 miles away, on San Luis Island in the Gulf of California (IID 1994). The Salton Sea currently supports a year-round population of California brown pelicans, where during the past few years single-day counts have sometimes exceeded 3,000 individuals (Patten *et al.*, in press). Records indicate that a brown pelican nested successfully in 1996 at the Salton Sea (the first nesting of a California brown pelican on an inland lake) and exhibited nesting activity in 1997 and 1998 (Charlie Pelizza, Sonny Bono Salton Sea NWR, pers. comm.). Because brown pelicans are associated with large open water bodies, habitat for brown pelicans in the proposed project area principally occurs at the Salton Sea where abundant fish populations provide foraging opportunities for brown pelicans. This species occurs almost anywhere along the shoreline of the Salton Sea, most often around rock outcrops and embankments. The brown pelican has nested on small islands of volcanic rock with a sandy base and at the Alamo River mouth on beds of matted reeds. From June through September they can be found at least occasionally on virtually every body of water in the Imperial Valley (Patten *et al.*, in press). In addition to the Salton Sea, brown pelicans are known to forage at Finney Lake in the Imperial Wildlife Area (U.S. Army Corps of Engineers 1996).

Juvenile brown pelicans tend to disperse the farthest from their natal site than any other age class and prefer estuaries over open coastal areas. As birds reach sexual maturity (3-5 years), it has been suggested that the birds return back to their natal site and rarely settle at another colony. Thus, birds that now use the Salton Sea are more likely to stay in the Gulf of California once the Salton Sea is no longer a viable source of fish. However, band returns indicate that brown pelicans are capable of moving from the southern California coast to the Salton Sea. Adults may also use specific wintering areas rather than disperse like the juveniles.

Brown pelicans declined greatly in the mid-20th century because of human persecution and disturbance of nesting colonies. This species has also experienced widespread pollutant-related reproductive failures during the late 1960's and early 1970's due to the use of DDT and the resultant egg-shell thinning. Because of these declines, the brown pelican was classified as endangered by the Service on October 13, 1970 (35 FR [2] 16047, USFWS 1970). As of the

1990's, the ecological effects of DDT contamination still had not been entirely eliminated within the Southern California Bight, and incidences of eggshell thinning do occur but at a greatly reduced frequency as compared to the early 1970's. Acute contamination of the Southern California Bight water mass by DDT compounds has thus been replaced by low-level, chronic contamination. Complete recovery of the brown pelican reproductive rates from past pesticide contaminations may still be years away as DDT and its known breakdown product DDE are quite persistent in the environment. Although its use is banned in the United States (Bennett 1996), it is still present in the Imperial Valley and Salton Sea which can affect the brown pelican's reproductive success as a result of bioaccumulation of DDE from foraging at the Salton Sea during the non-breeding season (USFWS 1996).

Brown pelicans also have been impacted by disturbance of their nesting colonies by fishing and recreational activities, particularly in the Southern California Bight (David Pereksta, USFWS, pers. comm.). Better regulation of human access (particularly at the Los Coronados Islands colony) and exotic predators would likely increase the nesting success of brown pelicans in these colonies by reducing the rate of nest abandonment.

Brown pelicans in the Southern California Bight rely largely on schooling fish species such as anchovy and sardine (USFWS 1983). This species would benefit from tighter controls over commercial fishing of these species, particularly in the vicinity of the breeding colonies. Impacts of commercial fishing can be magnified in years with the "El Niño Southern Oscillation" when warm currents drive fish schools north of the breeding colonies. Prey availability may be limiting the productivity of the Southern California Bight colonies; the reproductive rates have been relatively constant and below recovery targets for several years (Frank Gress, University of California at Davis, pers. comm.).

ENVIRONMENTAL BASELINE

Desert Pupfish

Desert pupfish were abundant along the shore of the Salton Sea through the 1950s (Barlow 1961). During the 1960s, the numbers declined, and by 1978 they were noted as scarce and sporadic (Black 1980). Declines are thought to have resulted from the introduction and establishment of several exotic tropical species into the Salton Sea (Bolster 1990; Black 1980). These introduced species prey on or compete with desert pupfish for food and space. Other factors responsible for declines in desert pupfish populations include habitat modification due to water diversions and groundwater pumping for agriculture (Pister 1974; Black 1980). There is also concern that introduced saltceder (tamarisk) near pupfish habitat may cause a lack of water at critical times due to evapotranspiration (Marsh and Sada 1993). Aerial pesticide application is a common practice around the Salton Sea that may also affect pupfish populations (Marsh and Sada 1993).

Desert pupfish occur in Salt Creek and San Felipe Creek and its tributaries. This species also occurs at and within the mouths of agricultural drains that discharge directly to the Salton Sea and shoreline pools along the edge of the Salton Sea. Desert pupfish have been located in agricultural drains within the proposed project area on the northwest, southwest, south, and southeast sides of

the Salton Sea. These drains currently number 52 total with 29 in IID's jurisdiction and 23 in CVWD's area. Maintaining these populations in the long-term has been determined to be necessary for the recovery of the species (USFWS 1993). Based on our current understanding, this includes maintaining the drain populations and providing for pupfish movement between individual drains. A status report for the desert pupfish is in preparation by the CDFG. They report that populations of desert pupfish in San Felipe and its tributaries are stable. Tilapia were present in San Felipe Creek in 1997, but they are now extirpated. Some other non-native fish may be present, but they are not considered a threat to pupfish populations in that location (Bureau of Land Management 2001).

Cooperative monitoring surveys have been conducted in 1993, 1994, and in 1996 for desert pupfish in non-refugium habitats in the Salton Sea, specifically in the mouths of irrigation drains and in two shoreline pools. The total number of pupfish trapped in 1993 was 504. In 1994 the total number was 538, however 259 of the pupfish were found dead in the traps that year (Michael Remington, IID, pers. comm.). Pupfish were trapped in over half of the 29 possible locations in the irrigation drains and shoreline pools tested in the 1993 and 1994 surveys. Results from the 1996 surveys indicated that the pupfish were only caught in the Trifolium Storm drain (16 pupfish), Trifolium 20-A (13 pupfish), San Felipe Wash (31 pupfish), Trifolium 19 (1 pupfish), Trifolium 12 (1 pupfish), Trifolium 23 (1 pupfish), Trifolium 1 (1 pupfish), and the "R" drain (1 pupfish; Sharon Keeney, CDFG, pers. comm.; and Michael Remington, IID, pers. comm.). The total number trapped in the 1996 survey was 65 pupfish. A study conducted by Sutton (2000) in 1999 that focused on the movement of pupfish between drains and creeks and their associated shoreline pools. This was not a comprehensive survey, but the total number of individuals captured was 3,239. The vast majority of these were found in two locations: the Trifolium 20A drain and the shoreline pool associated with the Trifolium 23 drain. More recent and limited surveys by the U.S. Geological Survey (USGS) found 217 desert pupfish in three locations around the north end of the Salton Sea (Barbara Martin, USGS, pers. comm.), but these surveys were not designed to estimate the desert pupfish population at the Salton Sea.

Yuma Clapper Rail

In California this species nests along the lower Colorado River, in wetlands along the Coachella Canal, the Imperial Valley, the upper end of the Salton Sea at the Whitewater River delta, and Salt Creek (NatureServe 2001). Hydroelectric dams along the Colorado River have apparently increased the amount of marsh habitat, and population numbers of the Yuma clapper rail may have increased expanding the range northward in response to the increase in available habitat (Bureau of Land Management 2001). Also, habitat was expanded through the creation of the Salton Sea in the early 1900s. The population along the lower Colorado River was estimated in the 1980s at 550-750 in the U.S. and 200 in Mexico (NatureServe 2001). The action area essentially covers the U.S. range of the species.

In the proposed project area, the principal concentrations of Yuma clapper rails are at the south end of the Salton Sea near the New and Alamo River mouths, at the Sonny Bono Salton Sea NWR, at the Wister Unit of the Imperial Wildlife Management Area, Imperial NWR, Cibola NWR, Mitty Lake, West Pond, Bill Williams Delta, Topock Gorge, Topock Marsh and at Finney Lake in the

Imperial Wildlife Management Area. As many of these areas occur on state reserve or NWR lands, these state and federal properties will continue to have a major role in the long-term conservation of this species. Continued access to adequate water to maintain these habitats will be a key factor in the long-term management of the Yuma clapper rail.

Between 1995 and 2002, an average of 306 rails have been counted around the Salton Sea, and an average of 276 were counted in the same period along the lower Colorado River corridor (USFWS, unpublished data). The Imperial Valley population represents an estimated 42 percent of the entire U.S. population of this species (Point Reyes Bird Observatory 1999; USFWS 1999; Lesley Fitzpatrick, USFWS, pers. comm.). Despite representing a sizeable proportion of the subspecies' population, overall numbers at the Salton Sea are modest (Patten *et al.*, in press). For example, only 96 individuals were censused around the south end of the Salton Sea during the summer of 1993 (AB 47:1149 AB) and only 279 were located during extensive surveys in 1999 (Shuford *et al.* 2000). Principal regional sites are the Wister Unit of the Imperial Wildlife Area, Unit 1 of the Sonny Bono Salton Sea NWR, and adjacent marshes around the New River. Yuma clapper rails have been found outside these refuge areas also. Between 1995 and 2002, a range of 3 to 42 (average of 20) clapper rails were counted outside the refuges (USFWS unpublished data). This includes the Trifolium 1 and Holtville Main irrigation drains (Steve Johnson, Sonny Bono Salton Sea NWR, pers. comm.; Hurlbert *et al.* 1997). A maximum count in the Holtville Main drain at one time was 5 pairs and 2 individuals (USFWS unpublished data). This particular drain is unusual for its length (17.8 miles) and extent of vegetation (Hurlbert *et al.*, 1997), and it may be more likely than most drains in the system to provide habitat for Yuma clapper rails given those characteristics. In 1994, 2 pairs and 2 single rails were heard calling in the Bruchard drain during breeding season surveys (Ken Sturm, Sonny Bono Salton Sea NWR, pers. comm.).

California Black Rail

Black rails occur along the lower Colorado River, with approximately 100 to 200 individuals estimated to occur from Imperial National Wildlife Refuge south to Mittry Lake (Rosenberg *et al.* 1991). In more recent surveys a total of 100 individuals were counted at 20 sites along the lower Colorado River (Courtney Conway, USGS, unpublished data). Of this total 62 black rails were found in Arizona, and 38 were in California.

This species was presumed to be rare and infrequent in the Salton Sea area until the late 1970s, when it was discovered that small numbers were present in the Imperial Valley and elsewhere around the Salton Sea. Other regional records from the late 1970s through the 1980s are from the vicinity of the New River mouth and Fig Lagoon. The species persisted at Finney Lake through the 1980s but disappeared when the CDFG drained the lakes for renovation, with the last bird recorded in April 1989 (Evens *et al.* 1991). A study by Jurek (1975) and other investigators in 1974 and 1975 identified eight marsh areas with black rails between the Coachella and East Highline Canals south of Niland. Six individual records near Niland from January and February (Patten *et al.*, in press) suggest that black rails are resident at the Salton Sink, but it may be only a sporadic winter visitor to the Salton Sink area (Garrett and Dunn 1981; Evens *et al.* 1991). The Coachella Canal south of Niland was concrete-lined in 1981, and all black rail habitat supported by canal seepage was desiccated (Evens *et al.* 1991). More recently, black rails were censused along the All

American Canal during April and May of 1988 in conjunction with Yuma clapper rail surveys. A minimum of three black rails was recorded for the area. In the a systematic survey for the species at the Salton Sea and surrounding areas in 1989, 15 birds were recorded in the Salton Sea area (Laymon *et al.* 1990). In 1999, the Point Reyes Bird Observatory failed to find the species during focused surveys for it around the south end of the Sea (B. Mulrooney in Patten *et al.*, in press). In 2000 Courtney Conway (USGS, unpublished data) found no California black rails in surveys around the Salton Sea area. These surveys also covered the seepage areas along the All American and Coachella Canals, and black rails were located in these surveys. A total of 21 were reported along the All American Canal and six along the Coachella Canal. Another five black rails were found along the New River. The reproductive status of these birds is uncertain, although some locations have had numerous calling birds over a period of several weeks in the spring, suggesting a breeding population (Reclamation and Salton Sea Authority 2000).

California Brown Pelican

Food availability, disturbance, and oceanic pollution currently appear to be the major limiting factors to populations of California brown pelicans (USFWS 1983). Potential threats related to these limiting factors include commercial fisheries, oil development, recreational fisheries, sonic booms and increased tourism (USFWS 1983). Most North American populations of this species were extirpated by 1970. Since the banning of DDT and other organochlorine use in the early 1970s, brown pelicans have made a strong recovery and are now fairly common and perhaps still increasing on the southeast and west coasts (Kaufmann 1996). The endangered Southern California Bight population of the brown pelican grew to 7,200 breeding pairs by 1987, but has experienced considerable population fluctuations in recent years and has not been considered sufficiently stable for delisting (CDFG 1992). In 1992 there were an estimated 6,000 pairs in Southern California. Future restoration efforts (currently being planned) to reduce the existing DDT contamination in the Southern California Bight would be beneficial to this breeding population.

The Salton Sea is part of the Rio Colorado Delta, and the brown pelicans at the Sea are most likely affiliated with the breeding colonies in the Gulf of California. Brown pelicans probably had little historical use of the Salton Sea (Anderson 1993), although the Salton Sea may have recently taken on greater importance for these birds as a result of the degradation of habitat in the Delta. Some visiting postbreeding pelicans were documented at the Salton Sea in the late 1970s, but overwintering was not confirmed until 1987. Use of the Salton Sea by brown pelicans subsequently increased. Now use is largely seasonal, typically numbering 1,000 to 2,000 birds, with peak numbers ranging from 4,000 to 5,000 birds in the late summer/early fall (Charles Pelizza, Sonny Bono Salton Sea NWR, pers. comm.). The age structure also varies seasonally with brown pelicans at the Salton Sea where adults dominate in the spring and juveniles arrive in the summer and are followed by adults in the late summer/early fall. Based on behavioral observations, the brown pelicans using the Salton Sea may come from a single breeding colony in the northern Gulf of California (Dan Anderson, University of California at Davis, pers. comm.). If these birds have become dependent on the Salton Sea to supplement their non-breeding forage requirements, the impacts of the loss of access to the Sea may have a greater impact than if the effects were spread throughout the Gulf of California population as a whole.

Brown pelicans at the Salton Sea roost predominantly at Obsidian Butte, Mullet Island, and the sand bars associated with the three river mouths (Charles Pelizza, Sonny Bono Salton Sea NWR, pers. comm.). Other areas are used in low numbers (e.g., the break waters along the south end of the Salton Sea), but these areas are subject to various human activities (e.g., vehicle use and fishing) and thus are not consistently available. The high use areas are currently surrounded completely or largely by shallow water, and they may be lost as functional roosts due to greater accessibility to terrestrial species as the Salton Sea recedes.

The brown pelican was first found to nest successfully at the Salton Sea in 1996 with 3 nests resulting in nine fledglings. Although pairs attempted to nest in 1997, five nests were unsuccessful due to flooding. An undocumented number of nesting attempts were observed in 1998, but no successful nests were established. No nesting activity has been recorded since 1998 (Charles Pelizza, Sonny Bono Salton Sea NWR, pers. comm.).

Brown pelicans have experienced losses at the Salton Sea as a result of annual outbreaks of avian botulism since 1996 (USFWS unpublished data). The greatest losses occurred in 1996 with a total of 2,034 birds affected by the botulism event. The losses have been less since that 1996 event, with numbers of brown pelicans affected ranging from 274 to 1,311. Given the increased effort to identify and rehabilitate sick birds, the number of mortalities relative to the total number of pelicans affected has decreased overall since the 1996 event. The cause of these annual outbreaks has not been determined conclusively, but the Salton Sea's highly eutrophic condition may be a contributing factor.

EFFECTS OF THE ACTION

Desert Pupfish

The desert pupfish is known to use irrigation drains that flow directly into the Salton Sea and the Salton Sea itself, and this species will be affected by water conservation-related changes in those two areas. These impacts are expected to be associated with potential reductions in habitat, increases in selenium concentrations in the drains, and physical/chemical barriers to movement in the Salton Sea that could result in isolating sub-populations within individual drains.

The water conservation activities proposed by IID will result in the reduction of flows in the drains that flow directly to the Salton Sea by 7-39 percent, depending on the proportion of fallowing to efficiency conservation conducted for the water transfer. Narrower and/or shallower flows may result in a physical reduction of habitat for the desert pupfish despite Reclamation's commitment to maintain the current linear extent of the desert pupfish habitat and the expectation that drains will be extended as the Salton Sea elevation goes down. Because the program is based on voluntary participation by farmers that will vary over time, specific reductions in the flows of individual drains cannot be determined. While the quantity of habitat may be reduced, the quality may be increased if the flow reductions result in fewer exotic species using the drains. *Tilapia zillii* and other exotic fish species are known to use the drains in addition to the desert pupfish. *Tilapia zillii*, in particular, favors deeper water for spawning, but desert pupfish are expected to use shallower depths than most other species (Marsh and Sada 1993). Thus, decreases in depth of flow may

offset the losses of physical habitat that occur by suppressing competition and/or predation by exotic species. The effect in this case is expected to be neutral or positive because decreases in depth are not expected to enhance and may reduce the reproduction of exotic species. If width decreases without adequate changes in depth, the desert pupfish could be confined to smaller physical space without a reduction in competitors and/or predators. This could result in a negative effect associated with the reduction in flows if not offset by the increased length of the drains as the Salton Sea recedes. Water conservation is expected to reduce the loading of suspended sediments and sediment-associated contaminants (e.g., phosphorus and organochlorine pesticides) into the aquatic environment, which could benefit desert pupfish. The net effect of these changes cannot be quantified at this time, but take in the form of harm may occur from reduced flows that result in reduced habitat and/or increased competition and predation in those drains in the IID system that flow directly to the Salton Sea.

As a result of the use of on-farm and systems water conservation, the Imperial Irrigation Decision Support System (IIDSS) model output indicates that selenium concentrations will increase over time to higher concentrations than are anticipated under the baseline. The concentrations under the proposed project are anticipated to be 2.24 to 11.7 $\mu\text{g/L}$ in the drains that flow directly to the Salton Sea whereas those concentrations were predicted by the model to be 2.24 to 8.48 $\mu\text{g/L}$ under the baseline. The mean concentration under the proposed project (5.88 $\mu\text{g/L}$) exceeds the baseline mean concentration (4.70 $\mu\text{g/L}$) by 1.18 $\mu\text{g/L}$. However, a study of surface drain water conducted in 1994 found concentrations of selenium in the range of 2 to 52 $\mu\text{g/L}$, with a mean concentration of 6 $\mu\text{g/L}$ (Setmire 1999). This suggests that the predictions provided by the model are somewhat low and should be used with caution. The BA provides long-term average concentrations for selenium in the surface drains of the Alamo and New River Basins. These concentrations are representative of the average concentrations in drain water in each of those basins. These concentrations are 7.9 and 7.4 $\mu\text{g/L}$ selenium, respectively, and they also suggest that the concentrations provided by the model for the direct-to-Sea drains may underestimate the future concentrations.

As part of a study recently funded by the Service, samples were collected from various drains and shoreline pools potentially occupied by desert pupfish. In this effort water, sediment, plant material, and surrogate fish samples were collected. Despite the fact that none of the drain water samples had detectable concentrations of selenium (detection limit of 5.6 $\mu\text{g/L}$), the other sample matrices had detectable concentrations which in many cases exceeded levels of concern. The sediment samples for the sampled drains had concentrations that ranged from <0.519 to 5.86 mg/kg dry weight (DW). The vegetation samples had concentrations that ranged from <0.992 to 3.97 $\mu\text{g/g}$ DW. The whole body surrogate fish samples had concentrations that ranged from 3.38 to 14.7 $\mu\text{g/g}$ DW. All 37 surrogate fish samples showed concentrations that exceeded 3 $\mu\text{g/g}$ DW, and 35 of the 37 exceeded 4 $\mu\text{g/g}$ DW.

Hazards of Selenium

Selenium Sources

Selenium, a semi-metallic trace element with biochemical properties very similar to sulfur, is widely distributed in the earth's crust, usually at trace concentrations (<1 µg/g, ppm; e.g., Wilber 1980; Eisler 1985). Some geologic formations, however, are particularly seleniferous (e.g., Presser and Ohlendorf 1987, Presser 1994, Presser *et al.* 1994, Piper and Medrano 1994, Seiler 1997, Presser and Piper 1998), and when disturbed by anthropogenic activity provide pathways for accelerated mobilization of selenium into aquatic ecosystems. Abnormally high mass-loading of selenium into aquatic environments is most typically associated with the use of fossil fuels, with intensive irrigation and over-grazing of arid lands, and with mining of sulfide ores (Skorupa 1998). Intensive confined livestock production facilities and municipal wastewater treatment plants may also contribute to accelerated mass-loading of selenium into surface water bodies. Agricultural irrigation over large areas of the western United States causes accelerated leaching of selenium from soils into groundwater. Natural and anthropogenic discharge of subsurface agricultural drainage water to surface waters is a major pathway for the mass-loading of selenium into aquatic ecosystems (Presser *et al.* 1994, Presser 1994, Seiler 1997, Presser and Piper 1998, Skorupa 1998).

Toxicity

For vertebrates, selenium is an essential nutrient (Wilber 1980). Inadequate dietary uptake (food and water) of selenium results in selenium deficiency syndromes such as reproductive impairment, poor body condition, and immune system dysfunction (Oldfield 1990; CAST 1994). However, excessive dietary uptake of selenium results in toxicity syndromes that are similar to the deficiency syndromes (Koller and Exon 1986). Thus, selenium is a "hormetic" chemical, i.e., a chemical for which levels of safe dietary uptake are bounded on both sides by adverse-effects thresholds. Most essential nutrients are hormetic; what distinguishes selenium from other nutrients is the very narrow range between the deficiency threshold and the toxicity threshold (Wilber 1980, Sorensen 1991). Nutritionally adequate dietary uptake (from feed) is generally reported as 0.1 to 0.3 µg/g (ppm) on a dry feed basis, whereas, the toxicity threshold for sensitive vertebrate animals is generally reported as 2 µg/g (ppm). That dietary toxicity threshold is only one order-of-magnitude above nutritionally adequate exposure levels (see review in Skorupa *et al.* 1996, USDI-BOR/FWS/GS/BIA 1998).

Hormetic margin-of-safety data suggest that environmental regulatory standards for selenium should generally be placed no higher than one order of magnitude above normal background levels (unless there are species-specific and site-specific data to justify a variance from the general rule). For freshwater ecosystems that are negligibly influenced by agricultural or industrial mobilization of selenium, normal background concentrations of selenium have been estimated as 0.25 µg/L (ppb; Wilber 1980), 0.1-0.3 µg/L (ppb; Lemly 1985), 0.2 µg/L (ppb; Lillebo *et al.* 1988), and 0.1-0.4 µg/L (ppb; average <0.2, Maier and Knight 1994).

Direct Waterborne Contact Toxicity

Selenium occurs in natural waters primarily in two oxidation states, selenate (+6) and selenite (+4). Waters associated with various fossil-fuel extraction, refining, and waste disposal pathways contain selenium predominantly in the selenite (+4) oxidation state. Waters associated with irrigated

agriculture in the western United States contain selenium predominantly in the selenate (+6) oxidation state. Based on traditional bioassay measures of toxicity (24- to 96-hour contact exposure to contaminated water *without* concomitant dietary exposure), selenite is more toxic than selenate to most aquatic taxa (e.g., see review in Moore *et al.* 1990).

Most aquatic organisms, however, are relatively insensitive to waterborne contact exposure to either dissolved selenate or dissolved selenite, as adverse-effects generally occur at concentrations above 1,000 $\mu\text{g/L}$ (ppb). By contrast, waterborne contact toxicity for selenium in the form of dissolved seleno-amino-acids (such as selenomethionine and selenocysteine) has been reported at concentrations as low as 3-4 $\mu\text{g/L}$ (ppb) for striped bass (*Morone saxatilis*; Moore *et al.* 1990). It would be expected, however, that at a long-term concentration of 5 $\mu\text{g/L}$ (ppb) *total selenium* the concentration of dissolved seleno-amino-acids would be substantively below 3-4 $\mu\text{g/L}$ (ppb) because seleno-amino-acids usually make up much less than 60-80 percent of *total dissolved selenium* in natural waters. For example, it was estimated that organoselenium made up only 4.5 percent of the total dissolved selenium in highly contaminated drainage water from the San Joaquin Valley (Besser *et al.* 1989). Under most circumstances, a long-term concentration of 5 $\mu\text{g/L}$ should be protective of aquatic life *with regard to direct contact toxicity*. Selenium, however, is bioaccumulative and therefore the direct contact exposure is only considered a minor exposure pathway for aquatic organisms (e.g., see review by Lemly 1996a).

Bioaccumulative Dietary Toxicity

Although typical concentrations of different chemical forms of selenium would be unlikely to cause direct contact toxicity at a long-term concentration of 5 $\mu\text{g/L}$ (ppb), as little as 0.1 $\mu\text{g/L}$ of dissolved selenomethionine has been found sufficient, via bioaccumulation, to cause an average concentration of 14.9 $\mu\text{g/g}$ (ppm, dry weight) selenium in zooplankton (Besser *et al.* 1993), a concentration that would cause dietary toxicity to most species of fish (Lemly 1996a). Based on Besser *et al.* (1993) bioaccumulation factors (BAFs) for low concentrations of selenomethionine, as little as 6 ng/L of dissolved selenomethionine would be sufficient to cause food chain bioaccumulation of selenium to concentrations exceeding toxic thresholds for dietary exposure of fish and wildlife. Thus, at a chronic concentration of 5 $\mu\text{g/L}$ (ppb) as *total selenium*, if more than 0.1 percent of the total dissolved selenium were in the form of selenomethionine, food chain accumulation of selenium to levels sufficient to cause dietary toxicity in sensitive species of fish and birds would occur. Unfortunately, relative concentrations of selenoamino-acids have not been determined in the field in California for waters where total selenium is found in the critical 1-5 $\mu\text{g/L}$ range. Further research is required to characterize typical proportions of seleno-amino-acids in waters containing 1-5 $\mu\text{g/L}$ (ppb) *total selenium*.

Based on waters containing 1-5 $\mu\text{g/L}$ (ppb) *total selenium*, composite bioaccumulation factors (defined as: the total bioaccumulation of selenium from exposure to a composite mixture of different selenium species measured only as *total selenium*) for aquatic food chain items (algae, zooplankton, macro-invertebrates) are typically between 1,000 and 10,000 (on dry weight basis; Lillebo *et al.* 1988, Lemly 1996a). Therefore, based on risk from bioaccumulative dietary toxicity, a chronic concentration somewhere in the range of 0.2 to 2 $\mu\text{g/L}$ (ppb) would not be expected to have adverse effects. More specifically, based on an analysis of bioaccumulative dietary risk and a

literature database, Lillebo *et al.* (1988) concluded that a chronic criterion of 0.9 µg/L (ppb) for *total selenium* is required to protect fish from adverse toxic effects. Furthermore, Peterson and Nebeker (1992) applied a bioaccumulative risk analysis to semi-aquatic wildlife taxa and concluded that a chronic standard of 1 µg/L (ppb) for *total selenium* was warranted. Most recently, Skorupa (1998) has compiled a summary of field data that includes multiple examples of fish and wildlife toxicity in nature at waterborne selenium concentrations below 5 µg/L (ppb), supporting the criteria recommendations of Lillebo *et al.* (1988) and Peterson and Nebeker (1992). A recently concluded regional survey of irrigation related selenium mobilization in the western United States, conducted jointly by several agencies of the U.S. Department of the Interior over a ten-year period, found that at 5 µg/L total selenium in surface waters about 60% of associated sets of avian eggs exceeded the toxic threshold for selenium, i.e., that 5 µg/L Se was only about 40% protective against excessive bioaccumulation of selenium into the eggs of waterbirds (Seiler and Skorupa, In Press).

Interaction Effects Enhancing Selenium Toxicity

Toxic thresholds for fish and wildlife dietary exposure to selenium have been identified primarily by means of controlled feeding experiments with captive animals (e.g., see reviews by NRC 1980, 1984, 1989; Heinz 1996, Lemly 1996a, Skorupa *et al.* 1996, USDI-BOR/FWS/GS/BIA 1998). Such experiments are carefully designed to isolate the toxic effects of selenium as a *solitary stressor*. Consequently, the toxic thresholds identified by such studies are prone to overestimating the levels of selenium exposure that can be tolerated, without adverse effects, in an environment with *multiple stressors* as is typical of the real ecosystems (Cech *et al.* 1998). There are at least three well-known multiple-stressor scenarios for selenium that dictate a very conservative approach to determining adequately protective concentrations for aquatic life:

1. **Winter Stress Syndrome** - More than 60 years ago it was first discovered in experiments with poultry housed in outdoor pens that dietary toxicity thresholds were lower for experiments done in the winter than at other times of the year (Tully and Franke 1935). More recently this was confirmed for mallard ducks (*Anas platyrhynchos*) by Heinz and Fitzgerald (1993). Lemly (1993), studying fish, conducted the first experimental research taking into account the interactive effects of winter stress syndrome and confirmed that such effects are highly relevant even for waters containing <5 µg/L (ppb) selenium. Consequently, Lemly (1996b) presents a general case for winter stress syndrome as a critical component of hazard assessments. It can be further generalized that any metabolic stressor (cold weather, migration, smoltification, pathogen challenge, etc.) would interact similarly to lower the toxic thresholds for dietary exposure to selenium. Based on a comparison of results from Heinz and Fitzgerald (1993) and Albers *et al.* (1996), the dietary toxicity threshold in the presence of winter stress was only 0.5-times the threshold level for selenium as a solitary stressor.

2. **Immune System Dysfunction** - Also more than 60 years ago, it was first noted that chickens exposed to elevated levels of dietary selenium were differentially susceptible to pathogen challenges (Tully and Franke 1935). More recently this was confirmed for mallard ducks by Whiteley and Yuill (1989). Numerous other studies have confirmed the physiological and histopathological basis for selenium-induced immune system dysfunctions in wildlife (Fairbrother and Fowles 1990,

Schamber *et al.* 1995, Albers *et al.* 1996). Based on Whiteley and Yuill's (1989) results, *in ovo* exposure of mallard ducklings to as little as 3.9 µg/g (ppm dry weight basis) selenium was sufficient to significantly increase mortality when ducklings were challenged with a pathogen. The lowest confirmed *in ovo* toxicity threshold for selenium as a solitary stressor is 10 µg/g (ppm dry weight basis; Heinz 1996, reported as 3 µg/g wet weight basis and about 70% moisture). In this case the multiple-stressor toxicity threshold is only 0.39-times the threshold level for selenium as a solitary stressor.

3. Chemical Synergism - Multiple stressors can also consist of other contaminants. For example, Heinz and Hoffman (1998) recently reported very strong synergistic effects between dietary organo-selenium and organo-mercury with regard to reproductive impairment of mallard ducks. The experiment of Heinz and Hoffman (1998) did not include selenium treatments near or below the threshold for diet-mediated reproductive toxicity and therefore no ratio of single-stressor versus multiple-stressor threshold levels is available. A field study involving 12 lakes in Sweden, however, found that in the presence of threshold levels of mercury contamination, the waterborne threshold for selenium toxicity was about 2.6 µg/L (ppb; see review in Skorupa 1998, and review in USDI-BOR/FWS/GS/BIA 1998). Meili (1996) concluded that, "The results [of the Swedish Lakes studies] suggest that a selenium concentration of only 3 µg/L can seriously damage fish populations."

Environmental Partitioning and Waterborne Toxicity Thresholds

Risk management via water concentration-based water quality criteria is an inherently flawed process for selenium (Pease *et al.* 1992, Taylor *et al.* 1992, 1993; Canton 1997). The process is flawed because the potential for toxic hazards to fish and wildlife is determined by the rate of mass-loading of selenium into an aquatic ecosystem and the corresponding environmental partitioning of mass-loads between the water column, sediments, and biota (food chain). However, a water column concentration of selenium can be an imperfect and uncertain measure of mass-loading and food chain bioaccumulation. For example, a low concentration of waterborne selenium can occur because mass-loading into the system is low (= low potential for hazard to fish and wildlife) or because there has been rapid biotic uptake and/or sediment deposition from elevated mass-loading (= high potential for hazard to fish and wildlife). Toxicity to fish and wildlife is ultimately determined by how much selenium is partitioned into the food chain. Several examples of potentially hazardous food chain bioaccumulation of selenium at waterborne selenium concentrations < 2 µg/L are known from California (Maier and Knight 1991, Pease *et al.* 1992, Luoma and Linville 1997, San Francisco Estuary Institute [SFEI] 1997a, Setmire *et al.* 1990, 1993; Bennett 1997) and elsewhere (Birkner 1978, Lemly 1997, Hamilton 1998).

Fish

A tremendous amount of research regarding toxic effects of selenium on fish has been conducted since the late 1970's. Recently, this body of research was reviewed and summarized by Lemly (1996b). Lemly reports that salmonids are very sensitive to selenium contamination and exhibit toxic symptoms even when tissue concentrations are quite low. Survival of juvenile rainbow trout (*Oncorhynchus mykiss*) was reduced when whole-body concentrations of selenium exceeded 5

µg/g (dry wt.). Smoltification and seawater migration among juvenile chinook salmon (*Oncorhynchus tshawytscha*) were impaired when whole-body tissue concentrations reached about 20 µg/g. However, mortality among larvae, a more sensitive life stage, occurred when concentrations exceeded 5 µg/g. Whole-body concentrations of selenium in juvenile striped bass collected from areas in California impacted by irrigation drainage ranged from 5 to 8 µg/g.

Summarizing studies of warm-water fish Lemly reports that growth was inhibited at whole-body tissue concentrations of 5 to 8 µg/g selenium or greater among juvenile and adult fathead minnows (*Pimephales promelas*). Several species of centrarchids (sunfish) exhibited physiologically important changes in blood parameters, tissue structure in major organs (ovary, kidney, liver, heart, gills), and organ weight-body weight relations when skeletal muscle tissue contained 8 to 36 µg/g selenium. Whole-body concentrations of only 4 to 6 µg/g were associated with mortality when juvenile bluegill (*Lepomis macrochirus*) were fed selenomethionine-spiked commercial diets in the laboratory. When bluegill eggs contained 12 to 55 µg/g selenium, transfer of the selenium to developing embryos during yolk-sac absorption resulted in edema, morphological deformities, and death prior to the swim-up stage. In a laboratory study of "winter stress syndrome" juvenile bluegill exposed to a diet containing 5.1 µg/g selenium and water containing 4.8 µg/L (ppb) selenium exhibited hematological changes and gill damage that reduced respiratory capacity while increasing respiratory demand and oxygen consumption. In combination with low water temperature (4 degrees Celsius), these effects caused reduced activity and feeding, depletion of 50 to 80 percent of body lipid, and significant mortality within 60 days. Winter stress syndrome resulted in the death of about one-third of exposed fish at whole body concentrations of 5 to 8 µg/g selenium.

Based on Lemly's review of more than 100 papers, he recommended the following toxic effects thresholds for the overall health and reproductive vigor of freshwater and anadromous fish exposed to elevated concentrations of selenium: 4 µg/g whole body; 8 µg/g skinless fillets; 12 µg/g liver; and 10 µg/g ovary and eggs. He also recommended 3 µg/g as the toxic threshold for selenium in aquatic food-chain organisms consumed by fish. Lemly reported that when waterborne concentrations of inorganic selenium (the predominant form in aquatic environments) are in the 7- to 10-µg/L (ppb) range, bioconcentration factors in phytoplankton are about 3,000. Consequently, he concluded that patterns and magnitudes of bioaccumulation are similar enough among various aquatic systems that a common number, 2 µg/L (ppb; for filtered samples of water), could be given as a threshold for conditions "highly hazardous to the health and long-term survival of fish".

Recently, Hamilton (1998) reviewed the demonstrated and potential effects of selenium on six species of endangered fish in the Colorado River basin, including the humpback chub (*Gila cypha*), Colorado squawfish (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), razorback sucker, flannelmouth sucker (*Catostomus latipinnis*), and roundtail chub (*Gila robusta*). Hamilton presents historical data supporting a hypothesis that long-term selenium contamination of the lower Colorado River basin may have been one of the factors contributing to the disappearance of endangered fish in the early 1930's. Contemporary issues of concern included the unusually high incidence of abnormal lesions on fish in the San Juan River, especially flannelmouth sucker, attributed to pathogens requiring inducement by stressors such as high contaminant concentrations or poor body condition. Other concerns included concentrations of selenium in fish eggs as high as

28 µg/g in razorback sucker from the Green River and as high as 73 µg/g in eggs of rainbow trout collected from the mainstem Colorado River between Glen Canyon Dam and Lee's Ferry. In controlled studies of larval razorback suckers fed food organisms collected from the wild, Hamilton found 2.3 µg/g or more of selenium in the diet to be sufficient to cause reduced survival. In an enclosure study where razorback suckers were held in selenium-contaminated aquatic environments (Adobe Creek, 9-90 µg/L (ppb) selenium, and North Roadside Pond of Ouray National Wildlife Refuge, 40 µg/L (ppb) selenium) for 9 months, muscle plugs contained 17 and 12 µg/g selenium respectively and eggs contained 44 and 38 µg/g selenium. Finally, Hamilton stressed that consideration of selenium effects was an important component of recovery planning for the Colorado River basin endangered endemics.

Desert Pupfish: Specific data exist to support a conclusion that the desert pupfish would be at risk from chronic selenium concentrations on the order of 5 µg/L (ppb). Setmire and Schroeder (1998) report on a field study of sailfin mollies in the Salton Sea area of California. The mollies were chosen as surrogate species to assess contaminant threats to the co-occurring endangered desert pupfish. Mollies and pupfish were simultaneously collected from one site and found to contain virtually identical whole-body selenium concentrations (Bennett 1997), which verified the utility of mollies as a surrogate indicator of pupfish exposure. During 1994, mollies were collected from 13 agricultural drains. For 10 of the 13 drains, whole-body selenium concentrations were in the range of 3 to 6 µg/g, a level designated by a panel of selenium researchers as "of concern" for warmwater fishes (USDI-BOR 1993, also see Gober 1994, CAST 1994, Ohlendorf 1996). Two of the other three drains that were sampled yielded mollies averaging >6 µg/g, a level designated by the panel of researchers as exceeding the toxic threshold for warmwater fishes. Unfortunately, contemporaneous measures of waterborne selenium in the sampled drains were not obtained for comparison to the mollie tissue data.

An inquiry with California's Colorado River Basin Regional Water Quality Control Board yielded file data on waterborne selenium for one of the 13 drains sampled for mollies in 1994; however the file data is for water samples collected in 1996 (R. Lukens, Regional Water Quality Control Board, pers. comm.). Ten monthly (March to December, 1996) measures of waterborne selenium in the Trifolium 12 drain averaged 4.96 µg/L (ppb). Sailfin mollies collected from Trifolium 12 drain in 1994 averaged 3.6 µg/g whole-body selenium, with a maximum of 3.8 µg/g (n=3). If the concentrations of selenium in the drain were roughly the same in 1994 as in 1996, then a concentration on the order of 5 µg/L (ppb) would be associated with expected pupfish tissue concentrations of selenium at the "level of concern." Borderline exposures for direct toxic effects may be particularly hazardous at the Salton Sea because of the recent record of diverse and frequent epizootic events documented for fish and birds at the Sea. It is well established for birds that selenium-induced immune dysfunction occurs at exposure levels below those required for direct selenium-poisoning. Until comparable studies are completed for fish, the safest assumption is that the results for selenium-induced immune dysfunction documented for birds may also apply to fish.

Harm in the form of reduced reproductive success and increased vulnerability to pathogen challenge (that could result in injury or mortality) could occur depending on the sensitivity of this species to the water conservation-related increases in selenium concentrations. Mortality is

possible for desert pupfish larvae depending on their specific sensitivity and the actual concentrations that result from the water conservation. The average concentrations in the drains that are expected with water conservation (2.2 to 11.7 $\mu\text{g/L}$) are not anticipated to result in direct mortality in the adult population, although peaks in concentrations, depending on their magnitude and duration, may result in adult mortality. These changes will affect slightly over half (29 of 52) of the agricultural drains that are currently occupied or potential habitat for the desert pupfish. This habitat has been identified as necessary for recovery of the species.

Salinity Effects

The salinity of the Salton Sea is expected to increase more rapidly with the proposed project than under the baseline. Pupfish have a high salinity tolerance, and they have been shown to survive salinities higher than 90 ppt. The Salton Sea Accounting Model (SSAM) predicts that the salinity will exceed 90 ppt after the end of the water transfer term under the baseline. With the proposed project the salinity is expected to exceed 90 ppt in 2027. This is 58 years sooner than under the baseline. The desert pupfish conservation measures call for the creation of connections between the drains to allow for inter-drain movement when the Salton Sea salinity has exceeded the 90 ppt threshold. A lower threshold will be used if new information suggests that it is appropriate. Because these connections will be in place prior to the Salton Sea salinity exceeding 90 ppt (or lower as appropriate), no harm should result from the salinity of the Salton Sea exceeding the 90 ppt threshold. However, these connections will require structural changes in the drain configurations. The construction and maintenance of these connections may result in injury or mortality of desert pupfish. This construction activity in the occupied portions of the drains is expected to require the use of heavy equipment to open the connections between drains, but we anticipate that it will be limited to a single connection of similar width as existing drains that intersects each drain once. The need for maintenance can be managed to some degree by controlling the slope of the connections to minimize sediment build up to the extent that this does not detract from the habitat conditions required by pupfish. Given the average frequency of similar activities in the Imperial Valley and the management opportunity described above, we anticipate that 20% of the connections would require maintenance annually. It is very difficult to survey for this species, so the number of pupfish impacted by this activity cannot be quantified at this time. There are 29 drains at the south end that will require connection (in three groups as the existing river deltas form barriers) and 23 drains at the north end (in two groups again as a result of the existing river delta functioning as a barrier).

Without these connections, pupfish would be isolated within individual drains, and the drains would be subject to random events such as run off of excess fertilizers, low dissolved oxygen events, and pesticide spills that could result in direct mortality of the pupfish within the drains where these events occur. To maintain the drain population, pupfish need to be able to move out of the drains when conditions become inhospitable and to move back into drains and re-establish themselves when conditions return to normal. We anticipate that without these connections, pupfish drain populations would ultimately be lost as such stochastic events eliminate individual drain populations one by one. The loss of these drain populations would limit the ability to recover the species. These connections are expected to provide an overall benefit to drain pupfish populations that should offset any short-term impacts associated with their construction.

Physical Effects

The extension of the drains that occurs unaided as the elevation of the Salton Sea declines may not allow for pupfish movement below the existing occupied areas depending on the configuration formed as a result of the flow and gradient. The Salton Sea bathymetry is currently not adequately mapped to determine if subsurface physical barriers are present between drains that will interfere with pupfish movement as the elevation of the Salton Sea declines with the proposed project. The removal of such physical barriers is anticipated to require minor construction along the lengths of the drains and shoreline of the Salton Sea. Because the disturbance associated with this construction is anticipated to be less than that associated with construction of the inter-drain connections, it is likely that harm of desert pupfish will be minimal as a result of this activity. As stated previously, this species is very difficult to survey so the number of individuals affected cannot be quantified at this time.

The pupfish refugium established as part of Pupfish Conservation Measure 1 will require regular maintenance to control vegetative growth and maintain the appropriate habitat conditions for desert pupfish. It is anticipated that this will result in harm in the form of temporary disturbance of the habitat. Use of heavy equipment could result in mortality of some fish. As described above for other construction activities, it is not possible to quantify this harm in terms of numbers of fish impacted. Overall, the maintenance will benefit the pupfish by maintaining the appropriate habitat conditions so the impacts associated with this activity should be offset by the benefits.

Monitoring activities necessary to implement the pupfish conservation measures will require capture of the pupfish using minnow traps. As part of the desert pupfish conservation measures, the Bureau will be developing a more consistent method to census this species. However, we still anticipate that some form of capture will be required for these surveys. In some limited cases there may be mortality associated with the current procedure as a result of unanticipated changes in water quality conditions. In most cases the pupfish are expected to be released without harm. It is hoped that the new procedure will reduce or eliminate the potential for such losses.

As part of the conservation measures for desert pupfish, selenium management measures (e.g., splitting combined drain flows and managed marsh outfall pipes) may have to be constructed to reduce selenium concentrations in some or all of the pupfish drains. These structures are not expected to require major modifications of the entire surface drain, but some construction will be required at the connection points. Some pupfish may be harmed or killed during this construction, but the extent should be limited because the fish will have the ability to seek shelter in unaffected portions of the drains. The long-term benefits of reducing the selenium concentrations should offset any short-term losses that occur.

Desert Pupfish Summary

Given the current state of our knowledge, our greatest concern for the pupfish is associated with the increases in selenium concentrations anticipated with water conservation. While not part of designated critical habitat, the drain pupfish populations have been identified in the Recovery Plan as necessary for long-term survival and recovery. Therefore, no critical habitat would be adversely

modified as a result of the proposed fish and wildlife conservation measures or water conservation activities, but recovery could be precluded without the ability to identify and respond to increases in selenium concentrations that have the potential to impact reproduction or survival (via reduced ability to respond to pathogen challenge) in time to prevent the loss of this population. We are currently conducting studies on selenium toxicity to desert pupfish. Reclamation and/or its conservation agreement partners will be providing the necessary funding to complete those studies in a timely fashion (5-7 years). Concurrently, Reclamation and its conservation partners will be conducting baseline surveys of the selenium concentrations in the potential pupfish drains and carrying out pupfish surveys (using the existing protocol as an interim measure). Therefore, considerably greater information should be available prior to the conversion from the fallowing associated with the 15-year minimization of project impacts, thus providing a more certain context in which to evaluate the baseline selenium concentrations and those that result from the implementation of on-farm and system water conservation. Specific trigger concentrations will be identified that when exceeded will result in the implementation of selenium control measures. It should be possible to identify the need for management action for selenium in advance of severe impacts by providing a thorough long-term monitoring program that closely tracks the selenium concentrations of the matrix or matrices being evaluated for these triggers. Because Reclamation has committed to providing for such a monitoring program that meets the approval of the Service and CDFG and to taking the appropriate management action in response to unacceptable selenium concentrations, we do not anticipate that this project will preclude the survival and recovery of the desert pupfish.

Because of the limited areal extent of disturbance associated with the construction of connections, removal of physical barriers, and construction of selenium management measures, these activities are not anticipated to preclude the continued existence of the desert pupfish. This conclusion is supported by the fact that desert pupfish have coexisted with a variety of agricultural activities since the drains were created, including a regular schedule of maintenance dredging.

No activities are planned within the area that has been designated as critical habitat for this species. Critical habitat has been designated within the San Felipe Creek watershed (San Felipe and Fish Creeks) upstream of the Salton Sea.

Yuma Clapper Rail

The Yuma clapper rail is known to use drain habitat with the appropriate vegetative cover in the Imperial Valley, and it will be affected by water conservation-related changes within the drains. These changes fall into two basic types: loss/degradation of vegetation as a result of increases in salinity of the drain flows and impacts to Yuma clapper rail reproduction resulting from increases in drain water selenium concentrations. Impacts to drain vegetation are not anticipated as a result of changes in drain flows of between 9 and 28 percent relative to current conditions (depending on the amount of water conserved through fallowing). Changes in flow in drains would be manifested as a total reduction in flow volume, with potentially shorter durations of peak flows and reduced frequency of peak flows. Periods of dryness likely would increase in frequency and duration, and potentially a greater number of drains would be dry at any given time. Nevertheless, the level of potential flow reduction in the drains is within the historic range of drain flows.

Salinity Effects

Agricultural drains support limited use by clapper rails. High-quality habitat for Yuma clapper rails consists of mature stands of dense or moderately dense cattails intersected by water channels. Clapper rails breed, forage, and find cover in this type of habitat. Clapper rails have also been reported using areas of common reed, although nesting is uncertain and density is lower than in cattail marshes. The IID drainage system is estimated to contain about 63 acres of cattails. Common reed, tamarisk, and arrowweed are the predominant species of the remaining 589 acres of vegetation estimated in the drainage system. The vegetation characteristics of the drains suggest the drains provide poor quality habitat for clapper rails. Home range sizes vary greatly; values of 0.3 to 27.4 acres/rail have been reported. However, in most cases the drains are unlikely to support a block of vegetation this size, which further suggests that habitat in the drains is of limited quality to clapper rails. Breeding has not been verified in the drains, but clapper rails have been documented in surveys of drains during the breeding season, suggesting that some breeding is occurring in drain habitats.

Much of the vegetation in the drainage system is tamarisk and common reed. These species are tolerant of a wide range of conditions. As such, they would adjust to flow changes in the drains, and their occurrence and distribution would not change substantially. Cattails and other wetland plants used as habitat by clapper rails are limited. Cattails are concentrated in the bottoms of drains. Because of the steep drain sides, little difference in water depths would occur with lower flow volumes. If drains were drier for longer periods of time, minor, temporary changes in the extent of cattails would potentially occur. Although such changes could not be quantified based on the hydrology model, they are believed to be small.

By increasing the ratio of tilewater to tailwater in the drains, the IID water conservation activities would increase salinity in the drains. Cattails are sensitive to salinity levels. Growth is best when water salinity is less than 3 g/L (3,000 ppm). Salinity levels of 3 to 5 g/L stunt the growth of cattails. Above 5 g/L (5,000 ppm), growth and survival of cattails are limited. The total amount of cattail vegetation estimated to be in the drains (63 acres) could potentially be reduced, as could the amount with good growing conditions. With conservation of 300 KAFY through on-farm and system-based measures, the acreage of cattails supported in the drains would potentially be reduced by 4 acres. An additional 23 acres of remaining cattail vegetation would be subjected to increased salinity levels that could stunt growth and reduce vigor of the plant. If all fallowing is used to conserve water, there would be no change in drain salinity and, therefore, no impacts to cattail vegetation. Use of fallowing to conserve a portion of the 300 KAFY would result in intermediate impacts. The loss or stunting of cattail vegetation in the drains constitutes a potentially adverse impact of IID's water conservation activities on Yuma clapper rails.

As part of its proposed rail conservation measures, Reclamation and/or its conservation agreement partners will create 31 acres of high quality managed marsh habitat (Rail Conservation Measure 1). The created habitat will be of substantially better quality for Yuma clapper rails than drain habitat because it will contain preferred plant species (i.e., cattails and bulrush), have better water quality, and be configured to provide an appropriate mix of dense vegetation interspersed with open water. While rails tend not to move during the breeding season once established unless forced to by

changing conditions (Bennett and Ohmart 1978), movements by unpaired males during the breeding season and by adults and juveniles during the non-breeding season allow birds to find new habitats (Eddleman and Conway 1998). The created habitat is anticipated to be managed in a similar manner as emergent freshwater marsh units are managed on the refuges and thus be attractive to clapper rails. With the overall increase in quantity and quality of clapper rail habitat in their U.S. range, the Service does not anticipate harm as a result of this potential impact. It is not necessary that the managed marsh be located in the Imperial Valley provided that the marsh is located in proximity to existing occupied habitat. The Service and CDFG will be consulted in locating the managed marsh.

Selenium Effects

Clapper rails also could be impacted through exposure to slightly higher concentrations of selenium in the drains as a result of IID's conservation actions. Following the methods described in the Draft HCP for IID's proposed water conservation and transfer program (Appendix C of the EIR/EIS [CH2MHill 2002]), potential impacts of increased selenium concentrations in the drains on clapper rail egg hatchability are predicted for IID's actions. Under current conditions, selenium concentrations result in hatchability impacts in approximately 3 percent of Yuma clapper rail clutches. As a result of IID's water conservation activities, hatchability impacts due to selenium could affect up to 6 percent of Yuma clapper rail clutches, comprising a 3 percent increase above current conditions.

Under the proposed Conservation Plan, Reclamation and/or its conservation agreement partners will create an additional 42 acres of high quality managed marsh to offset the impacts of increased selenium concentrations on clapper rail egg hatchability (Clapper Rail Conservation Measure 2). This acreage of managed marsh is in addition to the 31 acres created under Clapper Rail Conservation Measure 1 and would be phased in over 10 years. The selenium concentration of water used to support the managed marsh is expected to be close to 2 ppb. This selenium concentration is considerably lower than the selenium concentration in most drains in the IID water service area. Adverse impacts from selenium toxicity would be avoided in the managed marsh, and the quality of the managed marsh habitat would be further enhanced beyond that in the drains by design. While we still anticipate impacts to occur as a result of clapper rails foraging in the drains, such impacts would be limited. Given the maximum possible count of potentially breeding rails in drains was found to be on the order of 8 pairs (Holtville Main, Trifolium 1, and Bruchard combined), the increase in egg hatchability impacts is expected to affect at most a single Yuma clapper rail clutch. The additional acreage being created to offset this effect (42 acres) could accommodate 2 or 3 pairs. Because we expect the water quality in the created habitat to be better than what is in the drains, we expect a net increase in reproduction relative to the selenium-related impact.

Physical Effects

One additional potential source of habitat loss is the construction of lateral interceptors. Given that the entire drainage system has an estimated 63 acres of cattails and the lateral interceptor connections with any individual drain will be similar to the width of the drain itself, it is unlikely

that this construction activity will remove a measurable amount of cattail vegetation. Even if this were to occur, the impact would only be temporary. Cattails would be expected to return to the area as the conditions stabilized.

We anticipate some impacts associated with the rail conservation measures themselves. The clapper rails that come to occupy the marsh may be harmed during the protocol surveys required for monitoring. The use of taped vocalizations can result in the adults moving off the nest and exposing the eggs or chicks to predation or the elements thus resulting in the potential loss of those eggs or chicks. Some clapper rails could also be harmed as a result of the need to carry out management actions (e.g., burning) to maintain the long-term health of the 73 acres of managed marsh. Such disturbances will be temporary, infrequent (approximately every third or fourth year), and will result in an overall increase in habitat quality.

Yuma Clapper Rail Summary

The minor loss of Yuma clapper rail reproduction, potential harm associated with surveys, and potential harm associated with marsh management are not likely to preclude the survival and recovery of this subspecies when considered in the context that the majority of the population in the Imperial Valley is found on State and Federal wildlife refuges where habitat is managed specifically for Yuma clapper rails.

California Black Rail

The California black rail may use drain habitat with the appropriate vegetative cover and physical characteristics in the Imperial Valley (although such use has not been documented), and it may be affected by water conservation-related changes within the drains. Overall, drains do not support high-quality California black rail habitat. High-quality habitat for black rails consists of mature stands of dense emergent vegetation (particularly bulrush) with very shallow water levels and gently sloping shorelines. Black rails breed, forage, and find cover in this type of habitat. Black rails have also been reported using areas with cattails where water depths are adequately shallow. The IID drainage system is estimated to contain about 63 acres of cattails. Common reed, tamarisk, and arrowweed are the predominant species of the remaining 589 acres of vegetation estimated in the drainage system. The vegetation characteristics of the drains suggest the drains provide poor quality habitat for black rails. Telemetry studies at Mittry Lake found black rails to be sedentary, with home ranges averaging 1.2 acres or less (Flores and Eddleman 1991). The drains are unlikely to support a block of vegetation this size given their linear configuration, and the shape of the drain prism (steep sides and narrow bottom) is not conducive to black rail use. This suggests that habitat in the drains is of limited quality to black rails. Breeding by California black rails has not been verified in the drains.

The impacts that may occur to California black rails are very similar to those described above for the Yuma clapper rail. The changes that may affect them include increases in salinity and selenium concentrations as described above. Because the physical structure of the drains is even less likely to support use by black rails, we would expect even fewer pairs of this species to be affected. The additional acreage being created to offset these effects (73 acres) could include the appropriate

habitat characteristics to accommodate several pairs of black rails. Because we expect the water quality in the created habitat to be better than what is in the drains, we expect a net increase in reproduction relative to the salinity- and selenium-related impacts.

One additional potential source of habitat loss is the construction of lateral interceptors. Given that the entire drainage system has an estimated 63 acres of cattails and the use of the drains by black rails is expected to be very low, it is unlikely that this construction activity will remove a measurable amount of black rail habitat. Even if this were to occur, the impact would only be temporary. Emergent vegetation would be expected to return to the area as the conditions stabilized.

We anticipate some impacts associated with the rail conservation measures themselves. The black rails that come to occupy the marsh may be harmed during the protocol surveys required for monitoring. The use of taped vocalizations can result in the adults moving off the nest and exposing the eggs or chicks to predation or the elements thus resulting in the potential loss of those eggs or chicks. Some black rails could also be harmed as a result of the need to carry out management actions (e.g., burning) to maintain the long-term health of the 73 acres of managed marsh. Such disturbances will be temporary, infrequent (approximately every third or fourth year), and will result in an overall increase in habitat quality.

The minor potential loss of California black rail reproduction, harassment associated with surveys, and potential harm associated with marsh management, are not likely to affect the long-term status of the species, considering the small proportion of the species' rangewide population occurring in the drains at issue, as well as the minor and temporary disturbance anticipated in these habitats.

California Brown Pelican

The California brown pelican is present at the Salton Sea year-round. Peak numbers of this species are present during the summer months when large numbers of mostly juvenile birds come to the region as a result of dispersal from breeding colonies in Mexico. They will be impacted by the water conservation-related changes in salinity in the Salton Sea that reduce extensively the availability of fish in the Sea. For a smaller number of birds for which a forage base will remain, the impact will be in the loss of roost sites as the elevation decreases as a result of water conservation.

A small data set was available from the Sonny Bono Salton Sea NWR that included monthly counts of pelicans for the period of December 1999 through August 2001. The peak counts during that time occurred in June of 2000 and July of 2001 with an average for those peaks of 3,295 birds. This figure was then used in a Resource Equivalency Analysis (REA; NOAA 1995) to quantify the loss in bird use. Some assumptions were used in conducting this analysis. In consideration of the fact that tilapia are the predominant species of fish in the Sea (Costa-Pierce and Riedel 2000), their behavior makes them available to foraging pelicans (Glenn Black, CDFG, pers. comm.), and tilapia are believed to be the dominant fish in the pelicans' diet at the Salton Sea (Ken Sturm, Sonny Bono Salton Sea NWR, pers. comm.), we are making an assumption regarding loss of pelicans at the Sea relative to the estimated salinity threshold of this fish species. The decrease in pelican numbers is expected to occur more slowly at lower end of the salinity spectrum than at the higher end because

the tilapia is not expected to be affected, whereas the other fish species (orange-mouth corvina (*Cynoscion xanthulus*), Gulf croaker (*Bairdiella icistia*), and sargo (*Anisotremus davidsoni*)) that make up a small proportion of the diet are expected to be impacted at lower salinities. In the interval between 50 and 60 ppt, we assumed a loss of 10 percent of the pelicans currently using the Salton Sea. A 90 percent decrease was anticipated during the 60 and 65 ppt interval when impacts to tilapia are expected. We assumed a small population (25 birds) would remain at the Salton Sea as a result of the long-term availability of a small forage base at the river deltas and drains. A schedule of pelican numbers was developed with the water conservation activities and the minimization (15-year plan) and without the water conservation activities (baseline). The REA comparison yielded a figure for lost pelican-use years throughout the 45 years of the first term of the water transfer (12,383 lost pelican-use years). Because the fish population is expected to be limited to the river and drain mouths throughout the second term of the transfer, no additional impacts are anticipated from 2049 through 2078.

The restoration requirement is also based on the REA. After we determined the loss, we ran the credit calculation to determine an annual requirement for the operational period of the mitigation. In making this determination some parameters were set in advance. For the mitigation to offset the loss, it was determined that the structures should be in place in the year the 15 year minimization plan for the Salton Sea ends. Based on that start date and the length of the permit term, the REA was used to determine the annual requirement for that term needed to meet the CDFG fully mitigated standard. It was determined that full mitigation requirements would be achieved by providing for 1,200 pelicans with roost projects on the southern California coast.

A list of potential enhancement projects for brown pelicans was then developed that provided priorities based on the identified gaps in roost availability. The purpose of these concepts was to identify projects that could provide for a combination of roosts in the vicinity of foraging areas for 1,200 brown pelicans to offset the loss of such habitat at the Salton Sea. The outer Santa Barbara Harbor and San Diego Bay were identified as the top priority sites. The Santa Barbara Harbor site would replace a barge that as a result of very limited roost options in the area had a high level of documented use when it was temporarily moored in that area (Strong 2002a and 2002b). San Diego Bay has also been identified as a high priority site due to limited roost resources along the San Diego County coast (Strong 2002a, 2002b). San Diego Bay has a known forage base (Allen 1999) and offers protected waters that would provide for good roost opportunities with the addition of appropriate structures. These two sites will be required to meet the CDFG fully mitigated standard and are to be in place and functioning by 2018 (when the impacts beyond baseline changes begin), with other sites added as needed to achieve that mitigation requirement. Each site will need to demonstrate success as a roost through documented use by a minimum of 100 birds during three of the five initial years of surveys (to begin one year after implementation and occur monthly from June through October including day and night use). Credit toward the CDFG fully mitigated standard is additive between the two sites and will be determined based on peak use of the sites during those initial surveys. If full mitigation is not achieved with the first two projects, additional projects will be required. These additional projects should be implemented in a timely fashion such that they are in place by 2023. This deadline will be reconsidered by the Service and CDFG if the numbers of brown pelicans still using the Salton Sea are significantly higher than predicted.

Reclamation and/or its conservation agreement partners will provide for the placement of roosts adequate for use by 2,000 pelicans, with a minimum use requirement of 1,200 pelicans. The specific details regarding number, sizes, and locations of the roost structures will be determined based on the specific constraints of each site and on permit requirements of other agencies with jurisdiction over placement of the structures. Reclamation and/or its conservation agreement partners will provide adequate funds to support the management and monitoring of the roost structures annually throughout the water transfer term. There could be disruptions of pelican use in the future to carry out needed maintenance/replacement of the roost structures, which could result in temporary abandonment by those birds that otherwise would have used them. Such maintenance is anticipated to be required less than annually, with closure to last no more than three weeks. Any harm resulting from the increased energy requirements associated with longer travel between roosting and foraging areas that occurs during this activity is considered minor in comparison to the benefits accrued over the first project term.

Because the water conservation activities as described would maintain the salinity trajectory at essentially the baseline projection for the first 15 years, only minor impacts are anticipated to occur beyond any changes associated with the baseline conditions (i.e., loss of near shore roost sites associated with the baseline change in elevation). Some harm to brown pelicans resulting from the loss of roosts could occur as a result of the elevation difference of 0.6 feet between the water conservation activities and the baseline during the first 15 years, although we anticipate this to be small. Starting in the sixteenth year of the program, the salinity will increase and the bird numbers will decrease rapidly as compared to the baseline projection. The total loss of pelican use has been quantified at 12,383 pelican-use years. Because many of the post-breeding juveniles dispersing to the Salton Sea arrive in poor condition (Charlie Pelizza, Sonny Bono Salton Sea NWR, pers. comm. 2002), it is likely that at least a portion of these birds will not have adequate reserves to move to other foraging areas once the Salton Sea is no longer supporting an adequate fish population and would die as a result. The other pelicans that are not able to find adequate forage at the Salton Sea but are capable of moving on to other areas may be harmed by the lack of foraging opportunities and the depletion of energy reserves required for this additional migratory step. While this is expected to occur without the water conservation activities, the pace of the transition is faster with those activities.

The CDFG-required mitigation actions taken on the California coast should help offset these impacts. By providing roosts in proximity to existing forage fish resources, pelicans dispersing to the California coast during the non-breeding season will find additional roosts that will reduce their energetic requirements in moving from foraging to roosting areas. The increase in numbers of pelicans along the California coast during the non-breeding season is believed to result from dispersal of birds from Mexico, including some birds from the Gulf of California (USFWS 1983). Therefore, we anticipate that the Gulf of California breeding population that is believed to be the primary source of birds dispersing to the Salton Sea will benefit from the proposed brown pelican conservation measure.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological/conference opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Several projects are planned in the action area that may affect listed species in the Imperial Valley and/or Salton Sea. However, a number of these projects require action on the part of a Federal agency, and thus would require independent review under section 7 of the ESA. Therefore, the impacts of such Federal projects are not considered to be cumulative to the effects. Reclamation is the Federal lead agency on the Salton Sea Restoration Project, and the Service anticipates continuing to work with Reclamation to maximize the benefits and minimize the impacts associated with that project. The Inadvertent Overrun and Payback Policy is related to the QSA and will be overseen by Reclamation. The Colorado River Salinity Control Program is jointly funded by Reclamation, the Bureau of Land Management and the Department of Agriculture. This program provides for a variety of projects that maintain the salinity of the Colorado River below the designated thresholds. This is a factor in the overall salt loading to the Salton Sea. The Environmental Protection Agency is providing assistance (financial and technical) with the Mexicali Wastewater System Improvement Projects. Reclamation is the Federal lead agency on the Brawley wetlands demonstration project, and the Service intends to continue working with Reclamation to maximize the benefits and minimize the impacts associated with that project as it expands into other areas of the Imperial Valley. Several other projects on the southern California coast may benefit or impact California brown pelicans. These projects require Federal funding or approval and thus will require review under section 7 of the ESA. No cumulative effects were identified for the lower Colorado River, as projects occurring there that could impact federally listed species would involve modifications of wetlands and/or river operations, thus falling under Federal jurisdiction and requiring review under section 7.

Coachella Valley Water Management Plan

CVWD prepared the Coachella Valley Water Management Plan to provide an overall program for managing its surface and groundwater resources in the future. The objectives of this water management plan are to:

- Eliminate groundwater overdraft and its associated adverse impacts, including groundwater storage reduction, declining groundwater levels, land subsidence, and water quality degradation
- Maximize conjunctive use opportunities
- Minimize adverse economic impacts to Coachella Valley water users
- Minimize environmental impacts

The overall water management plan involves a number of actions to reduce the current overdraft of groundwater in the Coachella Valley through increased use of Colorado River water (reducing demand for groundwater pumping) and various recycling and water conservation activities to reuse

or decrease the consumption of water. A substantial portion of the additional Colorado River water to be used pursuant to the water management plan (up to 100 KAFY) is the conserved water to be transferred by IID to CVWD under the QSA. Other elements of this plan are not dependent on implementation of the QSA.

Some activities associated with the receipt and use of water under the QSA may result in changes in the flows or selenium concentrations of the agricultural drains within the CVWD. Increased flows and/or selenium concentrations may impact the habitat values associated with the drain extensions/connections created to minimize the impacts of water conservation. These changes may, in turn, result in impacts to listed species such as the desert pupfish and Yuma clapper rail. The desert pupfish may be subject to greater competition or predation from exotic species as a result of increased flows in the CVWD drains. Both the desert pupfish and the Yuma clapper rail may be impacted by increased selenium concentrations. However, the Service and CDFG are currently working with CVWD on components of a HCP that will either be incorporated into the Coachella Valley Multi-Species Habitat Conservation Plan or become a stand-alone HCP for Improvement District 1 (the area that can receive the conserved water from IID). We currently anticipate that the impacts associated with the receipt and use of the conserved water will be addressed in one of these two ways. We should have the results of the toxicity testing before measurable changes in selenium occur because the ramp-up rate for the transfer to CVWD is relatively slow and does not begin until 2008. Therefore, we do not anticipate unmitigated cumulative impacts to desert pupfish and Yuma clapper rails that use the drains as a result of the CVWD's receipt and use of water under the QSA. In addition, the connections created as part of this project may be designed to ameliorate some of the effects of increased flow if that is identified as a need at the time of implementation of Pupfish Conservation Measure 1.

Should CVWD not move forward with their HCP as planned, impacts could occur to the desert pupfish and Yuma clapper rail. Desert pupfish could be impacted by the increases in flows, which potentially favor exotic fish species that are competitors with or predators of desert pupfish. This is potentially the primary factor impacting the desert pupfish in the drains. The drains in the CVWD area that flow directly to the Salton Sea account for almost half of this drain habitat for the pupfish (23 of 52 total). Long-term occupation of these drains has been identified as necessary for the recovery of this species. The unmitigated effect of these changes could be significant. Rails could be impacted by potential increases in maintenance necessitated by the increased flows. Direct loss of eggs and chicks could occur if maintenance were to be carried out during the breeding season. However, these drains do not provide for a large proportion of the Yuma clapper rail population in the Salton Trough. Increased selenium concentrations resulting from the increased use of Colorado River water in the Coachella Valley could have the same effects as those described above for the water conservation activities on desert pupfish and rails.

Use of this water may change the salt balance within the Salton Sea as a result of the increase salt load in agricultural drain water from the Coachella Valley. This could impact the ability of the California brown pelican to continue foraging at the Salton Sea. However, this change was considered in the development of the 15-year minimization of impacts to the Salton Sea described above. As a result, the salinity will not materially deviate from that predicted for the baseline. The

desert pupfish will not be impacted as its connectivity requirements are being addressed through the desert pupfish conservation measures proposed as part of Reclamation's project.

MWD/CVWD State Water Project Water Transfer and Exchange

This project involves the exchange between MWD and CVWD of State Water Project water entitlements and Colorado River water. CVWD would transfer 35,000 AF of its State entitlement to MWD, and in exchange MWD would arrange for the delivery of 35,000 AF of Colorado River water to CVWD. Delivery may be made via the Colorado River aqueduct or the Coachella Canal. As this is simply an exchange of water with no changes in volume and only minor changes in salinity of CVWD's drain water and the Salton Sea, we do not anticipate any measurable changes in the habitat values for listed species.

Cabazon Power Plant

This project involves the construction of a 500-Megawatt natural gas-fired power generation facility on the Cabazon Indian Reservation in the Coachella Valley. The current plans call for the use of 5,000 AF of water from the Coachella Canal annually. This water would be used largely for cooling water and would be discharged to the Coachella Valley Storm Channel (Whitewater River). Currently, very few details are available about this project. Depending on the salinity of the discharge, it may function to increase or decrease the salinity of the Salton Sea. We do not believe there are adequate details to have considered this project in the development of the 15-year minimization plan, but the volume of water involved is relatively low. It is unlikely that this would cause a measurable increase in the salinity of the Salton Sea, and the discharge may function as dilution water if the salinity is below that of the Sea. No measurable cumulative effects to the California brown pelican are anticipated as a result of this project. The desert pupfish will not be impacted as its connectivity requirements are being addressed through the desert pupfish conservation measures proposed as part of Reclamation's project.

North Baja Powerline

The North Baja Powerline is a 6-mile powerline project in the southwest portion of the IID service area. The construction and maintenance of the powerline may result in the loss of riparian, wetland, and agricultural field habitats that may contribute to the impacts associated with the loss of these habitats from the proposed fish and wildlife conservation measures and interrelated effects of water conservation activities under consultation. However, because of the linear nature of the powerline project, habitat losses are not anticipated to occur in large blocks. The proposed fish and wildlife conservation measures and the interrelated effects of the water conservation activities under consultation includes replacement of lost habitat adequate to offset the impacts to the Yuma clapper rail and California black rail such that there would not be cumulative effects in combination with the North Baja Powerline.

Heber Wastewater Treatment System Project

This wastewater treatment plant serves the community of Heber, which is located approximately 5 miles north of the Mexican border in the Imperial Valley. The plant discharges to an agricultural drain that is a tributary to the Alamo River. The expansion of the plant would increase the discharge from 0.402 to 0.810 million gallons/day. At full capacity, the discharge from the plant would increase the inflows to the Salton Sea by 457 AFY. While this is a beneficial effect, it may not result in a measurable change in the salinity of the Salton Sea. There would be no cumulative effects to the California brown pelican or the desert pupfish as a result of this project.

Colorado River Basin Regional Water Quality Control Board's Watershed Management Initiative

The Watershed Management Initiative is the Colorado River Basin Regional Water Quality Control Board's (Regional Board) internal planning document for the Salton Sea Transboundary Planning unit. This watershed is the priority watershed within the Region. The watershed has been determined to be impaired, and this plan provides the guidance to addressing these impairments. The implementation of this plan should improve the water quality within the watershed and thus benefit a variety of species. Specific actions within the plan include the Total Maximum Daily Load Program discussed below.

Total Maximum Daily Load Program

Pursuant to the requirements of the Clean Water Act, the Regional Board has identified and ranked "impaired water bodies" within their Region for which Total Maximum Daily Loads (TMDLs) need to be established. The Regional Board will develop and adopt a TMDL for each combination of an impaired water body and a constituent of concern and will develop the necessary implementing actions to achieve the TMDL. The TMDL is anticipated to result in improved water quality in the drains, rivers and Salton Sea, thus benefitting a variety of species. While some measures to control constituents of concern may result in reduced drain flows and ultimately reduced inflows to the Salton Sea, many of these types of measures would also function to conserve water and therefore would not be expected to be additive to the proposed fish and wildlife conservation measures and the interrelated effects of the water conservation activities under consultation. In most cases we anticipate that the majority of measures will involve Best Management Practices that do not reduce the inflows substantially. Therefore, we do not anticipate measurable cumulative effects to the California brown pelican or the desert pupfish.

Coachella Valley/Salton Sea Non-Point Origin Source Project

The Coachella Valley Storm Channel carries agricultural drain water, treated municipal effluent, and runoff into the Salton Sea. The Coachella Valley/Salton Sea Non-Point Origin Source Project seeks to address non-point source pollution entering the Salton Sea and the Coachella Valley Storm Channel. The lead agency for that project is the Torres-Martinez Band of Desert Cahuilla. That effort includes groundwater protection, wetland treatment cells for agricultural drain water, Best Management Practices for controlling non-point source pollution, and raising public awareness and

participation in pollution prevention. The wetlands would reduce the movement of nutrients into the Salton Sea, particularly nitrogen. Phosphorus, however, is considered the limiting nutrient in the Salton Sea system so reductions in eutrophication of the Salton Sea at this scale are not expected to be measurable. The wetlands will also increase evapotranspiration of the water, thus reducing slightly the volume of flow in the Coachella Valley Storm Channel. Because these wetlands are small and would have only a minor impact on the inflows to the Salton Sea, measurable cumulative impacts to listed species are not anticipated as a result of this project.

Allegretti Farms Increased Groundwater Pumping in the San Felipe Creek Watershed

Allegretti Farms was recently granted a conditional use permit by Imperial County to increase groundwater production for agricultural use from 12,000 acre-feet/year to up to 27,000 acre feet/year (10 acre-feet/acre of farmable land). The project proponent provided a hydrological study in support of their application that concluded that the deep aquifer being tapped for their agricultural operation was separate from the shallow aquifer that supplies perennial flows to San Felipe and Fish Creeks. The report went on to conclude that the run-off from the agriculture may in fact contribute to the shallow spring flow supporting the pupfish habitat. This hydrology report has not undergone independent review, but it does suggest that the desert pupfish and its designated critical habitat would not be impacted by the increase in groundwater pumping. Only continued monitoring of the habitat will provide the necessary information to confirm or refute the conclusions of the hydrological study. The cumulative effect of this activity on the desert pupfish cannot be determined at this time.

CONCLUSION

After reviewing the current status of the species, the environmental baseline from the action area, the effects of implementation of all of the proposed fish and wildlife conservation measures concurrent with the interrelated effects of the water conservation activities, and the cumulative effects, it is the Service's biological opinion that the implementation of the proposed fish and wildlife conservation measures concurrent with the interrelated effects of the water conservation activities is not likely to jeopardize the continued existence of the desert pupfish, Yuma clapper rail, and California brown pelican. The proposed voluntary fish and wildlife conservation measures, as a package, adequately avoid and/or minimize impacts such that survival and recovery of these species are not precluded. The proposed fish and wildlife conservation measures and interrelated water conservation activities are not likely to destroy or adversely modify critical habitat for the desert pupfish, as designated areas only occur outside the action area.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulation pursuant to section 4 (d) of the ESA prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as

intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, rather than the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and 7(o)(2) of the ESA, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with this Incidental Take Statement.

In conducting our analysis we have assumed that all of the voluntary fish and wildlife conservation measures and interrelated water conservation activities will be implemented as described in the project description. The take described below is that which is anticipated with all of the voluntary fish and wildlife conservation measures in place concurrent with the implementation of the water conservation activities. If any of the fish and wildlife conservation measures or water conservation activities are not implemented as described in the project description, our analysis of effects would require modification through re-initiation of the consultation to address changes not contemplated in this opinion.

The measures described below are nondiscretionary, and must be undertaken by Reclamation or made a binding condition of any grant, agreement or permit, as appropriate, for the exemption in section 7(o)(2) to apply. Reclamation has a continuing duty to oversee the activity covered by this incidental take statement. The Service acknowledges that these are voluntary fish and wildlife conservation measures. However, if Reclamation and/or its conservation agreement partners fail to implement the proposed fish and wildlife conservation measures as described above and/or fail to adhere to the terms and conditions of this incidental take statement, the protective coverage of 7(o)(2) may lapse. This exemption does not take effect until the conservation agreement(s) between Reclamation and its conservation agreement partner(s) has/have been executed. To monitor the impact of the incidental take, Reclamation and/or its conservation agreement partners must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(i)(3)]

AMOUNT OR EXTENT OF TAKE ANTICIPATED

Desert Pupfish

The Service anticipates that the take of this species will be difficult to detect because of its small size, the inability to detect dead specimens as a result of that size and the nature of the activities that may result in take, the inconsistency of capture associated with the current survey methodology, and other variables that may result in mortality of this species (e.g., fertilizer run off causing drops in dissolved oxygen and spills of toxic pesticides). However, the following forms of take can be anticipated as a result of the proposed fish and wildlife conservation measures and associated water conservation activities.

Harm may occur in all 29 IID drains potentially occupied by desert pupfish as a result of reductions in flow associated with water conservation activities that reduce the areal extent of existing pupfish habitat. Take may occur as a result of increased selenium concentrations associated with water

conservation activities in the 29 IID potential pupfish drains that cause reduced viability of eggs or mortality of larval pupfish. Harm or indirect mortality of adult pupfish may occur through increased vulnerability to pathogen challenge resulting from the increased selenium concentrations in the drains. Direct take of adults as a result of selenium concentration increases is possible, but it is not as likely as mortality resulting from multiple stressor effects.

The construction and maintenance of connections among IID pupfish drains at the south end of the Salton Sea and among CVWD pupfish drains at the north end of the sea and the removal of physical barriers between these drains may result in injury or mortality of pupfish in the area undergoing these activities. For the reasons described above, it is not possible to quantify this take. With the exception of maintenance of the connections once created, these activities are only anticipated to disturb the connection points with the drains, not lengths of occupied habitat within the drains. Once in place, however, the connections may require periodic removal of sediment along their lengths to maintain appropriate habitat conditions. We anticipate that this take will occur within 20 percent of the drain connection system annually.

Adaptive management measures for selenium in the 29 IID drains may result in injury or mortality of pupfish in the area undergoing these activities. For the reasons described above, it is not possible to quantify this take. Should this include the splitting of drain flows or similar measures, the new drain channels may require periodic removal of sediment along their lengths to maintain appropriate habitat conditions. We anticipate that this take will occur within 20 percent of these adaptive management measures annually.

The pupfish refugium will require regular maintenance to control vegetative growth and maintain the appropriate habitat conditions. It is anticipated that this will result in harm in the form of temporary disturbance of the habitat. Use of heavy equipment could result in mortality of some fish. For the reasons described above, it is not possible to quantify this take in terms of numbers of fish impacted.

Monitoring is required to determine the need for selenium minimization measures and to document the success of the minimization measures once implemented through Reclamation's proposed fish and wildlife conservation program. In the case of the desert pupfish, this involves its capture. In rare instances, water quality conditions may change while pupfish are in the minnow traps such that mortality events may occur. Reclamation and its conservation agreement partners have agreed to develop more accurate survey methods that should take into consideration these potential problems, thus reducing or eliminating the mortality potentially associated with pupfish surveys. We anticipate capture of pupfish within all portions of the existing pupfish drains, future connections, and the pupfish refugium to be created as part of the proposal. During the interim period while a new protocol is being developed, we anticipate one mortality event annually (i.e., one trap found with dead pupfish) as a result of changed water quality conditions while the traps are set. While we cannot predict at this time how much a new protocol would reduce this mortality, we do not anticipate that it would exceed this amount (i.e., one trap found with dead pupfish annually).

Yuma Clapper Rail

The Service anticipates that 1 Yuma clapper rail clutch could be lost annually as a result of selenium concentration increases in the IID drains associated with water conservation. All of the Yuma clapper rails that come to occupy the 73 acres of marsh created to minimize the impacts of the water conservation activities may be harmed as described in the effects analysis as a result of the need to conduct protocol surveys that require the playing of taped vocalizations as often as annually to confirm the proper function/condition of the habitat for rail use. On an intermittent basis (once every three to four years) the rails occupying the marsh could be harmed as a result of management measures carried out to improve habitat quality. Because the disposition of the managed marsh at the close of the water transfer agreement has not been determined, no minimization measures have been incorporated to offset the impacts of potential closure. Therefore, no take is exempted for this activity.

California Brown Pelican

The Service anticipates the incidental take of California brown pelican as the loss of 12,383 bird-use years resulting from the increased rate of salinization of the Salton Sea and subsequent accelerated loss of the forage base for this species. Over the course of the years that these impacts will occur, this loss in bird use functionally equates to the number of birds impacted. This loss is anticipated to result in harm to all pelicans affected by this change and mortality to some unquantifiable (this will vary from year to year depending on foraging conditions in the Gulf of California) portion as a result of inadequate body condition to find alternative foraging sites. We also anticipate harm in the loss of roost sites for pelicans remaining at the Salton Sea as a result of the greater elevation decline associated with this project. The number affected by this change cannot be quantified as it will depend on the forage base that remains available at the river and drain mouths, but we anticipate a minimum of 25 birds would be affected annually. Lastly, we anticipate harm to an unknown number of California brown pelicans as a result of the temporary inaccessibility of the created roosts on the California coast as needed for periodic maintenance.

The Service will not refer the incidental take of any migratory bird for prosecution under the Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. §§703-712) if such take is occurring in compliance with the terms and conditions (including amount and/or number) specified herein.

REASONABLE AND PRUDENT MEASURES

The Service believes that the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take of desert pupfish, Yuma clapper rail, and California brown pelican.

1. Measures shall be taken to minimize the mortality or injury of listed species associated with the loss of existing habitats.
2. Measures shall be taken to minimize the mortality or injury associated with selenium contamination in existing and created listed species habitats.

3. Measures shall be taken to minimize the mortality or injury of listed species associated with construction and maintenance/management of created habitats.

4. Measures shall be taken to minimize the mortality or injury associated with monitoring activities for listed species that are required to guide the implementation of or assure the success of the proposed fish and wildlife conservation measures.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Reclamation must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary.

1. The following terms and conditions implement reasonable and prudent measure 1:

- 1.1 Reclamation and its conservation agreement partners shall configure all drain extensions in the IID and CVWD areas to maximize pupfish habitat and achieve no net loss of pupfish habitat in terms of drain length and width dimensions (i.e., areal extent) as the Salton Sea recedes.
- 1.2 Reclamation and its conservation agreement partners shall provide for the creation of roost structures for California brown pelicans that are anticipated to continue to forage on the limited remaining fish at the river and drain mouths to offset the loss of existing roosts when the Salton Sea elevation drops below -235 feet. It may be possible to modify existing structures (e.g., Mullet Island or its surroundings) to preclude predator access to achieve this goal. The structures shall meet with the approval of the Service and CDFG and shall be sized to accommodate a minimum of 25 pelicans.

2. The following terms and conditions implement reasonable and prudent measure 2:

- 2.1 Reclamation and its conservation agreement partners shall monitor selenium concentrations in the desert pupfish drains to assure that unanticipated impacts resulting from selenium exposure are not likely to occur. The study program set forth in Pupfish Conservation Measure 2 for determining potential selenium impacts shall include collection of baseline data for selenium concentrations in water, sediments, prey items, and surrogate fish species in the pupfish drains. Any long-term monitoring program for selenium impacts to desert pupfish shall include collection of data for tissue concentration, water concentration, or dietary concentration, as appropriate based on the results of the study program. The monitoring plan shall be developed in coordination with, and subject to the approval of, the Service and CDFG.
- 2.2 Reclamation and its conservation agreement partners shall develop a habitat creation plan for the managed marsh that includes design features to minimize the

for selenium bioaccumulation in Yuma clapper rails and thus reduce the harm potentially associated with such bioaccumulation. This habitat creation plan shall be approved by the Service and CDFG prior to its implementation.

3. The following terms and conditions implement reasonable and prudent measure 3:

- 3.1 Reclamation and its conservation agreement partners shall design the inter-drain connections discussed in Desert Pupfish Conservation Measure 1 to minimize the maintenance requirements that could result in take of desert pupfish to the extent possible without significantly reducing their habitat value.
- 3.2 Where dewatering is required for construction of pupfish connections, Reclamation and its conservation partners shall implement gradual dewatering of the construction sites within potential pupfish drains to allow desert pupfish to move out of the area such that they are not stranded by dewatering. A qualified biologist shall be present to relocate pupfish to a safe location if necessary to prevent stranding as a result of the physical structure of the drain. The biologist shall maintain a complete record of all desert pupfish moved from hazardous areas during project construction. At a minimum, the information shall include: location (written description and map), date and time of observation, along with details of the relocation site; basic life history information (i.e., length and sex); and general condition and health, including any apparent injuries/state of healing.
- 3.3 Reclamation and its conservation agreement partners shall provide for adequate water to maintain appropriate habitat conditions for survival and reproduction of desert pupfish in the desert pupfish refugium.
- 3.4 Reclamation and its conservation agreement partners shall provide for funds and personnel to implement management of the pupfish refugium. Such management shall be conducted in a manner that minimizes the need for routine use of heavy equipment that could result in injury or mortality of pupfish in the refugium. Reclamation and its conservation agreement partners shall develop a management plan for the refugium that specifies the management procedures and schedule including the anticipated frequency of use of heavy equipment in the refugium. This management plan shall be developed in coordination with, and subject to the approval of, the Service and CDFG. Should more extreme management measures be required as a result of unanticipated circumstances, use of any unapproved procedures shall require the prior approval of the Service and CDFG.
- 3.5 Reclamation and its conservation partners shall immediately notify the Service and CDFG regarding any needed emergency repairs on the pupfish connections, pupfish selenium management measures, rail created habitat, or pelican roost structures that may result in disturbance of or impacts to the listed species so that the Service and CDFG can provide technical assistance to minimize the impacts associated with implementing the repairs.

- 3.6 Reclamation and its conservation partners shall implement any necessary management measures to maintain the habitat quality of the created rail habitat outside the Yuma clapper rail and California black rail breeding season of March 1 through September 15. This will avoid the injury or mortality of rail eggs and/or chicks.
 - 3.7 Reclamation and its conservation agreement partners shall schedule regular maintenance of the created pelican roosts during the month of December to minimize disturbance of migrating pelicans and the resident population that could result in harm through a lack of access to dry sites where the birds can roost and maintain their plumage. Exceptions to this scheduling shall be approved by the Service and CDFG.
4. The following terms and conditions implement reasonable and prudent measure 4:
- 4.1 Survey methods for desert pupfish shall include the use of wire minnow traps with or without bait until superseded by a new Service and CDFG-approved protocol. Wire traps have proven to be more effective in comparison trials than other trap materials such as plastic, thus giving a more accurate evaluation of the status of the desert pupfish population.
 - 4.2 Minnow traps shall be set during daylight hours only and will be checked for the presence of desert pupfish at least every three hours. There shall be no overnight trapping, as this has resulted in mortality of pupfish during low dissolved oxygen conditions that occur at night.
 - 4.3 Handling may involve taking length measurements to assess size and age class of individuals and shall require minimal exposure out of water. Any pupfish exhibiting signs of physiological stress shall be released immediately at the point of capture to minimize the potential for injury associated with such stress.
 - 4.4 Surveys for Yuma clapper rails shall be conducted in accordance with the approved Service protocol (Attachment C) to assure comparability with other survey efforts and minimize harassment unless authorized in advance by the Carlsbad Fish and Wildlife Office.
 - 4.5 Disturbance to the rails during the breeding season shall be minimized to the maximum extent possible within the constraints of the survey protocol to reduce the chances of nest abandonment or other impacts to reproductive success.
 - 4.6 Taped calls are to be used only to initially locate individual rails, and not to elicit further behavior from rails to reduce the chances of nest abandonment or other impacts to reproductive success. Tapes shall not be used to elicit responses from rails if the surveyor detects the presence of potential avian or mammalian predators that could injure or kill rail adults, chicks or eggs.

- 4.7 Survey activities shall not be conducted during inclement weather conditions that would significantly reduce the ability to detect the rail species or expose rail nest contents to the elements (e.g., rain or strong wind) thus resulting in the failure of eggs to hatch or reducing chick survival.
- 4.8 Personnel conducting the survey/monitoring activities shall have a section 10(a)(1)(A) permit issued by the Service to work with the desert pupfish and/or Yuma clapper rail (as appropriate) or have adequate qualifications and experience based on a review by the Service to qualify for such a permit to assure that the above terms and conditions are appropriately implemented and take is minimized.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of the incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded or the terms and conditions are not complied with, such incidental take represents new information requiring review of the reasonable and prudent measures provided and reinitiation of consultation. Reclamation must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures. Operations must be stopped in the interim period between initiation and completion of the new consultation if it is determined that the impact of the additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(I).

Reporting Requirements

Reclamation shall submit reports of the previous year's activities to the Service and CDFG by March 31 of each year. This report shall include a summary of the fish and wildlife conservation actions implemented in the previous year along with the results of any monitoring/survey activities conducted. The report will also include basic statistics on the water conservation activities in the Imperial Valley (e.g., water conservation activities implemented, volume of water conserved, and acres fallowed for water conservation). The Service and CDFG shall have access to the raw data from monitoring activities for review upon request. The reporting will occur annually unless the Service and CDFG approve a longer reporting interval.

The Service's Carlsbad Fish and Wildlife Office (760-431-9440) must be notified within three working days should any listed species be found dead or injured in or adjacent to the action area. A written notification must be made within five calendar days and include the date, time, and location of the discovered animal/carcass, the cause of injury or death, and any other pertinent information. Injured animals should be transported to a qualified veterinarian or certified wildlife care facility and the Service informed of the final disposition of any surviving animal(s). All dead specimen(s)/carcass(es) shall be submitted to (1) educational/research institutions possessing the appropriate State and Federal permits, (2) Carlsbad Fish and Wildlife Office, or (3) Division of Law Enforcement (contact 310-328-1516 for further direction). Failing deposition to one of these entities, the carcass should be marked, photographed, and left in the field.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans or to develop information. The recommendations provided here do not necessarily represent complete fulfillment of the agency's 7(a)(1) responsibility for these species.

1. The Service recommends that Reclamation continue to utilize its authorities to study ways to address Salton Sea restoration for the benefit of not only listed species but a wide variety of migratory birds as well.
2. Reclamation and its conservation agreement partners should consider conducting experimental trials to identify silt removal techniques and seasonal timing that minimize the injury or mortality of desert pupfish that may be associated with removing silt from the connections as necessary maintain suitable conditions for use by desert pupfish.
3. Reclamation and its conservation agreement partners should consider implementing a program to monitor wintering mountain plovers in the Imperial Valley. This monitoring should include annual surveys for mountain plovers on a valley-wide basis. In the initial monitoring effort data would be collected to identify the habitat use patterns and winter foraging habitat requirements for this species in the Imperial Valley. A minimum of three consecutive years of data collection on habitat use/requirements would be required. This data in combination with the annual plover surveys and information on agricultural patterns throughout the Imperial Valley would be used by the Service to determine the magnitude of crop changes and subsequent potential impacts to the mountain plover so that appropriate management actions would be identified prior to losses of a magnitude that could interfere with survival and recovery. The 15-year plan provides for adequate time to complete these surveys prior to any major water conservation-related crop changes in the Imperial Valley. Three consecutive years of data collection and evaluation of that information can be accomplished before the acreage of fallowing exceeds 10,000 acres (in 2007 at the earliest, based on the current delivery schedule). This increment of 10,000 acres of fallowing is less than 5 percent of the average acreage of the preferred crop types. Such a change is not likely to impact the survival and recovery of the species.

For the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the proposed action as outlined in the BA that accompanied your July 23, 2002, request for initiation and the Errata to the BA that you submitted to this office. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary

Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. Please contact me or Carol Roberts of my staff at (760) 431-9440 if you have any questions regarding this biological/conference opinion document.

Attachments:

Figure 1.1 - Imperial Irrigation District

Figure 1.2 - Salton Sea

Attachment A - General Approach to Monitoring Changes in Suitable Breeding Habitat for the Southwestern Willow Flycatcher

Attachment B - Feasible off-site mitigation options for brown pelicans

Attachment C - Yuma Clapper Rail Survey Protocol

Attachment D - Chronology of the Imperial Irrigation District Water Transfer and Habitat Conservation Plan

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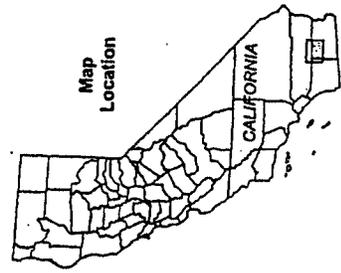
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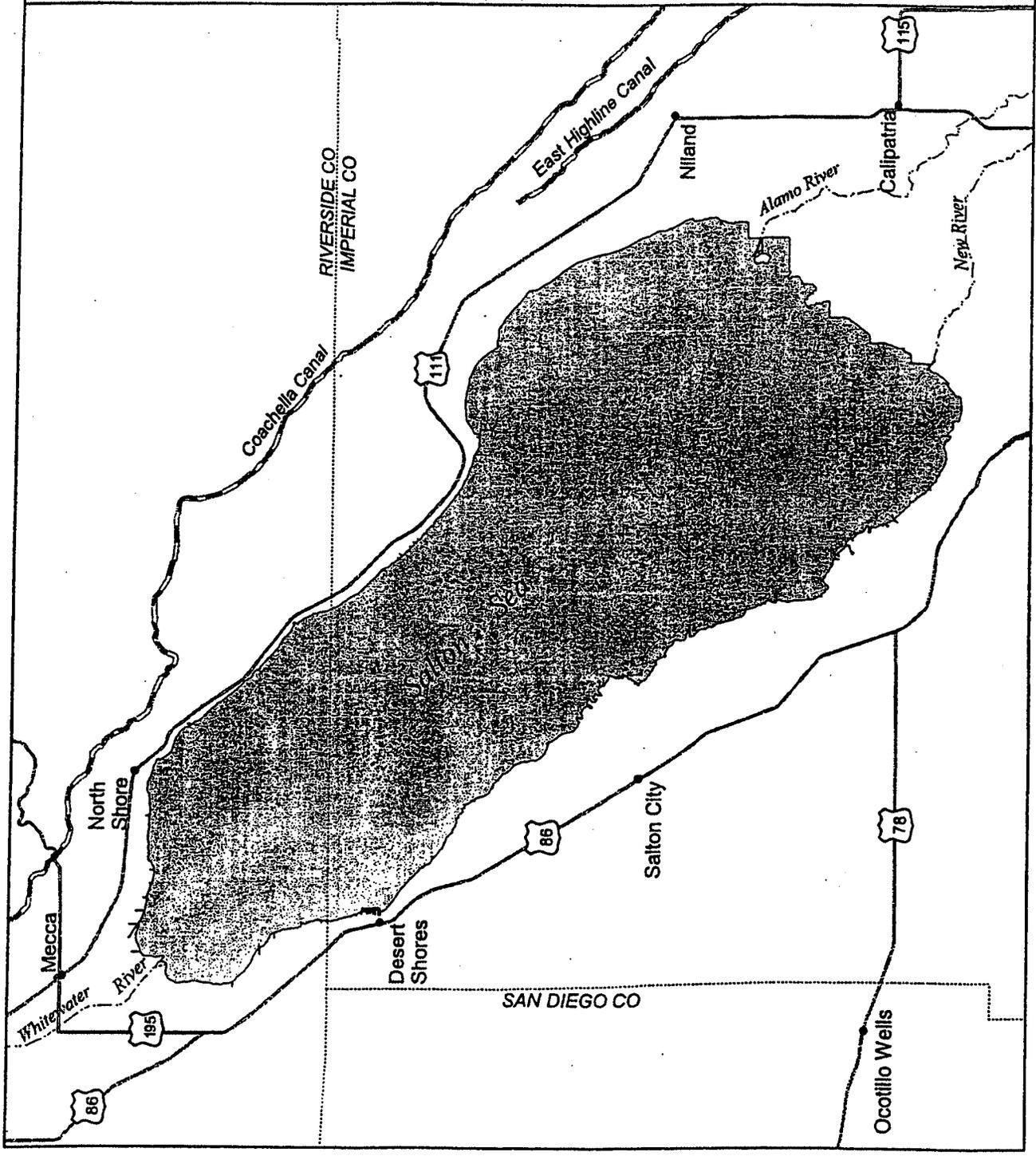
- SALTON SEA
- AQUEDUCT/CANAL
- COUNTY LINE
- INTERSTATE HIGHWAY
- REGIONAL HIGHWAY
- RIVER
- CITIES

Source:
University of Redlands
1999; DOI 1999;
and Reclamation 1999

3 0 3 Miles

SCALE IS APPROXIMATE

Figure 1-2
Salton Sea



Attachment A

General Approach to Monitoring Changes in Suitable Breeding Habitat for the Southwestern Willow Flycatcher

Under Willow Flycatcher Conservation Measures 1 and 2, Reclamation and its conservation agreement partners will conduct a baseline survey and periodic subsequent surveys to quantify net changes in the total amount of suitable breeding habitat for the willow flycatcher in areas adjacent to the Salton Sea, East Highline Canal, and planned lateral interceptor projects. Areas of suitable breeding habitat would be mapped using the most appropriate technology (e.g., aerial photography and satellite imagery). As appropriate and necessary, a geographic information system (GIS) of the habitat data will be developed.

The same process will be used for conducting the subsequent surveys. Mapped areas will be revisited to determine if there have been changes in the extent of suitable breeding habitat in each area. The boundaries of the mapped areas of suitable breeding habitat will be updated as appropriate. In addition to revising the mapped areas, every five years Reclamation and its conservation agreement partners will acquire recent (no greater than one year old) Digital Orthophoto Quarter Quadrangles (DOQQs) or aerial photographs and review them to determine if tamarisk has colonized new areas. If the photographs indicate that suitable breeding habitat for willow flycatchers may have developed in new areas, these new areas will be surveyed and mapped using the same methods as for the baseline surveys. The GIS, if one was developed, will be updated accordingly. Reclamation and its conservation agreement partners will submit a report of the baseline and subsequent surveys to the Service and CDFG within six months of completing the surveys.

ATTACHMENT B**Feasible off-site mitigation options for brown pelicans**

Location	Roost Site	Forage Base Enhancement	Action	Remarks
Santa Barbara(Outer)	X		Place and anchor barge	Historically provided habitat for about 1,000 brown pelicans
San Diego Bay (South)	X		Install appropriate structures, such as pilings at individual sites	Several sites currently used by brown pelicans. Surveys for suitable sites needed.
Buena Vista Lagoon	X	X	Install floating docks. Create islands from dredge and spoil material. Install tidal flood gate.	No current use by brown pelicans.
Moss Landing – Salt Ponds Enhancement	X		Operate/maintain tidal flood gates for 6 ponds	Current use by about 3,000 pelicans.
Parson's Slough (part of Elkhorn Slough)	X		Install/operate/maintain tidal flood gate. Restore existing islands/create additional islands	Use of 1/3 acre island by about 30 pelicans.
San Dieguito Lagoon	X		Install floating docks or permanent pilings	No current use by brown pelicans. Restoration plan pending.
Bataquitos Lagoon	X		Install floating docks	Small numbers of brown pelicans current use tidal mudflats and sandbar
San Elijo Lagoon	X	X	Move and enlarge connection to ocean. Install floating docks	Current use uncertain.
Ocean Waters – Southern California Coast	X		Place and anchor barge(s)	No estimate of current use of similar structures

Source: Glenn Black, California Department of Fish and Game.

Attachment C

YUMA CLAPPER RAIL SURVEY PROTOCOL JANUARY 2000

These instructions are for the official surveys for Yuma clapper rail (*Rallus longirostris yumanensis*) which are used to provide information on population trends of this endangered species. Significant changes have been made from earlier survey protocols and these instructions require the use of the new survey tape. These instructions will be in place for the 2000-2004 survey seasons, after which the Fish and Wildlife Service will review them in concert with the Yuma Clapper Rail Recovery Team. If there are questions about this survey protocol, or to obtain cassette tapes for use in the survey, please contact the Arizona Ecological Services Office at the address at the end of this document.

1. Please review the list of official survey locations on pages 3 and 4. If your agency will be unable to survey any or all of the assigned locations, please contact the AESO as soon as possible so we can try and find volunteers to survey the location.
2. Before any survey for the Yuma clapper rail, review the training tape and the survey tape to become familiar with the various calls. The tapes repeat various "clatter" and "kek" calls and are 60 minutes long. This will allow you to complete several stops before having to rewind. Also, make sure your tape recorder and speaker produce good quality sound at 80 decibels, measured one meter from the speaker.
3. Use 1:24000 USGS topographic maps for base maps. Sections of the map should be enlarged to show the survey location and route. Before beginning the survey, review maps of past surveys. Note especially the placement of "stops" from previous years. The same stops should be used, maintaining the same number. Any new stops added should have a unique number and be recorded on the map. GPS may be used to more carefully delineate stop locations.
4. All official surveys must be conducted between March 15 and May 15. The survey protocol calls for 2 surveys of each location or route per year. A third survey can be added if time and staff resources permit. There is a minimum of one week between surveys. Surveys should be conducted on the same routes used in previous years. Survey stops should be at 150-200 meter intervals unless local conditions warrant a different distance. Make sure the route and all stops are clearly recorded on the survey map.
5. Arrive at the survey location to begin surveying about 30 minutes before sunrise. Surveys should continue no later than 3 hours after sunrise. No evening surveys should be conducted for the official survey.
6. Upon reaching the location, fill in the weather information section of the cover sheet. If the wind speed is greater than 10 mph (a breeze that keeps leaves and small twigs in constant motion or extends a light flag), do not conduct official surveys. Responses to the calls are difficult to hear over the rustling of marsh vegetation.

7. For the survey, get as close to the marsh vegetation as possible at each stop. Note the time in the "time start" column. Wait quietly for one minute to listen for rails. Then play the tape, directing the speaker toward the marsh and at approximately 80 decibels volume. At each stop, play the tape for 2 minutes, turn it off for 2 minutes, turn it on for 2 minutes and turn it off then listen for one minute (total survey time 7 minutes). Keep to the 2 minute intervals as carefully as possible. Listen for rail responses during the entire period and record responses on the data sheet.
8. Record responses from each rail on a different line. If you do see/hear a pair, record the individuals separately and check the "was rail paired" column. All rails seen or heard at stops during the survey are to be counted. If you hear the same rail twice, only count it as one bird. Rails heard or seen at other times while on site during the survey are incidental and are recorded at the bottom of the data sheet. Since some observers are interested in other species, there is a column to record other species of birds observed during the survey on the data sheet.
9. After the survey has been completed, record on the cover sheet any events or disturbances that may have affected the survey results (other loud birds, boat or vehicle noise, etc.). Also, record the weather conditions. Make any other notes of observations of other species (as appropriate).
10. Please make sure the cover and data sheets are clearly filled out. The information can be used to define rails/station (all rails seen/heard), rails/stop (rails seen/heard at each stop or an average) and rails/hour (each stop has 7 minutes of survey time) after the surveys have been completed. The official survey will continue to look at rails per station.
11. Completed reports are due to AESO by July 1 of the survey year. Reports will include cover and data sheets and a map showing the survey route. Send completed survey forms and maps to:

Yuma Clapper Rail Coordinator
USFWS-AESO
2321 W. Royal Palm Rd. Suite 103
Phoenix, Arizona 85021
602/640-2720 FAX 602/640-2730

Attachment D

CHRONOLOGY OF THE IMPERIAL IRRIGATION DISTRICT WATER TRANSFER AND ENDANGERED SPECIES ACT COMPLIANCE

The Agreement between Imperial Irrigation District (IID) and San Diego County Water Authority (SDCWA) for the transfer of up to 300,000 acre-feet of water per year was signed by those agencies in **April of 1998**.

The Fish and Wildlife Service (Service) initially met with the Bureau of Reclamation (Bureau), IID and SDCWA to discuss the transfer on **January 6, 1999**. This initial meeting was the introduction to the proposed project for the Service.

A second meeting occurred on **February 19, 1999**, which focused on the issues of Endangered Species Act (ESA) compliance through section 7 versus section 10, direct and indirect impacts in the Imperial Valley and San Diego County, and the California 4.4 Plan. The assurances associated with section 10 were important to IID given the term of the agreement (45 years with an option to extend another 30 years) and the potential need for participants to secure loans.

The Notice of Preparation (NOP)/Notice of Intent (NOI) to prepare an Environmental Impact Report(EIR)/ Environmental Impact Statement (EIS) on the water transfer project was published **September 24, 1999**.

Staff from the Service attended the **October 19, 1999** scoping meeting, one of a series of meetings conducted during the comment period on the NOP/NOI.

On **December 7, 1999**, the Service began regular meetings with the Bureau, IID and SDCWA to begin the development of the Habitat Conservation Plan (HCP) to address all impacts within the Imperial Valley, the Salton Sea, and along the All-American Canal. The lower Colorado River species were also discussed. This first meeting was somewhat organizational; it focused on the roles and responsibilities, schedule, scope, coordination, and the status of the Salton Sea Restoration Project and Lower Colorado River Multi-Species Conservation Plan. A brief presentation was provided on the San Diego County Water Authority's receiving area and the potential for impacts there.

The second regular meeting on **February 3, 2000** centered on the ESA compliance approach for the transfer project and how that tied in with the Lower Colorado River Multi-Species Conservation Plan. The Quantification Agreement and its compliance schedule was also discussed. An outline of the HCP and an initial species list were also provided at that meeting. **This initial list included 21 species.** The consultant (CH2MHill) walked the group through how their process of elimination was conducted to get down to that list.

The **March 8, 2000** meeting included discussions of the HCP National Environmental Policy Act (NEPA) requirements as compared to the requirements of the project overall and how a single

document could address both. The Bureau of Reclamation agreed to send a letter inviting the Service to be a cooperating agency on the EIS so this need can be met. A supplemental NOI will be required prior to releasing the draft document to inform the public that this is the approach being taken. The major tasks required in completing the process were laid out. New maps supported a discussion of the regional setting and HCP area. Indirect effects in receiving areas were discussed, and SDCWA stated that Metropolitan Water District (MWD) would be providing a white paper on the issue March 13. The final discussion of the meeting centered on the covered species list. This meeting, in combination with a follow up conference call on March 9, resulted in further refinement of the covered species list. **At that point seven species were definitely on the covered species list, 12 were still being considered, and two species were to be dropped from the list.**

On **March 27, 2000**, the Service received a call from IID's consultant informing us the IID wanted to keep all of the potentially sensitive species that had been identified within the HCP project area. They were in the process of weighing the costs of coverage versus the risks of no coverage for each species. At that time they were developing the covered activities list, firming up the project area boundary, and beginning their evaluations of potential impacts and mitigation measures.

The meeting on **April 12, 2000** included a review of the HCP area which includes the IID service area and the All-American Canal corridor. The 100 year flood plain of the Colorado River was excluded because it was covered in the Lower Colorado River Multiple Species Conservation Plan. The canal lining is covered under a separate consultation, but this coverage would include operational and maintenance activities. The covered activities list (attached) was provided to the group (this included 18 general activities grouped into four categories). This covered essentially all IID activities. We discussed the third party activities and the need to limit that to water conveyance/conservation activities. **A revised species list was provided which included 60 species (10 federally listed or proposed).** The Service raised concerns that such an extensive list would be difficult to address in the given time frame. IID's concerns focused on their 75 year commitment with the water transfer and the resulting broad coverage that their commitment requires. The group was also presented with the conceptual approach for mitigation in the HCP. The primary mitigation suggested was wetland creation that will address the broadest suite of species. The basic concept is to measure mitigation by area rather than number of individuals of the species to be addressed. IID has not provided a detailed proposal of how they will address the temporal loss of habitat in the Salton Sea that will occur with the project. These changes are expected to be significant, however, based on the model prepared by the Bureau of Reclamation for the Salton Sea Restoration Project. Under current inflow conditions, the Salton Sea's salinity in the year 2030 is expected to be on the order of 53,000 mg/L. Under the reduced inflow, the salinity in 2030 is expected to be approximately 75,000 mg/L. Elevation is also expected to differ. The Sea's elevation under current inflows is expected to be approximately -224 feet mean sea level in 2030. Under reduced inflows, the elevation is expected to be approximately -234 feet mean sea level. The change in salinity is expected to result in changes in the Salton Sea's fauna (including the loss of the fishery that currently supports fish-eating birds) on a much more

accelerated rate as compared to the current inflow conditions. The final action item to come out of the meeting was that a draft NOI would be prepared by Washington, DC and California Solicitors' Office staffs.

The meeting on **May 10, 2000**, began with a discussion of the area to be discussed in the EIR/EIS versus the HCP. The EIR/EIS will cover the area to the edge of the 100 year flood plain (the edge of the Lower Colorado River Multiple Species Conservation Plan area). The HCP, on the other hand, will extend up into the flood plain to the discharge from the desilting basins to cover IID operational and maintenance activities in the area. The Lower Colorado River Multiple Species Conservation Plan and EIS will cover the federal action (i.e., change in point of diversion) within this area. This change in coverage area will require the additional coverage of lower Colorado River species. Tables were sent to the group in advance of the meeting (received May 5 via e-mail) that included a preliminary evaluation of the potential impacts to covered species and possible mitigation to address those impacts. These were very conceptual and needed to be related to specific covered activities. The difficulties of dealing with species with little site specific information were discussed, and an adaptive management approach was suggested by the consultant. We discussed the difficulties of evaluating the potential for jeopardy and developing terms and conditions in these circumstances. The Service offered the option of a phased approach to the HCP to allow for coverage of the listed species and any other "high risk" species in the current time frame and addition of species through amendments. IID reiterated concerns associated with their long term commitment. More detailed species accounts, more detailed activities descriptions, and a framework for the HCP were the next items to be distributed to the group.

On **May 12, 2000**, the Service submitted our acceptance of the cooperating agency designation to the Bureau of Reclamation.

An initial set of species descriptions (incomplete) was provided in advance (e-mail sent June 7) of the **June 14, 2000**. That meeting began with a presentation by IID staff on the hydrological model that is being developed for the Imperial Valley. The model will be used to predict the outcomes of a variety of possible conservation scenarios which will then be evaluated for species impacts. It will also serve as a means to determine compliance with IID's 3.1 million acre-foot/year cap included in the Quantification Settlement Agreement (QSA). The appropriate scale for evaluation of the model output/impacts was determined to be on the basis of "drainsheds" rather than individual drains or valley-wide. The discussion turned to the issue of additional coverage within the flood plain of the Colorado River and why that was needed. It relates back to the length of IID's commitment and the desire to have assurances associated with all HCP species coverage. **This coverage necessitates the addition of 29 species to the covered species list (two federally listed).** This complicates further the task of completing the HCP within the needed time frame. The NOI will have to address these species as well.

At the **July 24, 2000** meeting the Service was presented with an expanded description of the proposed covered activities and a draft document describing the conceptual approach for the

Multi-Species Conservation Plan. The packet included an analysis of effects of the covered activities for the first of the eight species groupings being proposed. There was preliminary agreement that the overall approach was a useful organizational tool, but it was pointed out that we can't lose sight of individual species' needs in the process. A formal presentation was made of the categories of mitigation that IID is proposing to address impacts to the covered species which have now been grouped based on habitat use. Deep water ponds, managed marsh, and "on-channel" ponds were identified as the primary types of created habitats they are considering. The scale of individual sites was provided, but no quantification of the valley-wide needs had been developed. The California Department of Fish and Game raised concerns about the impacts to the sport fishery and the need to address that in the EIR/EIS. The Service agreed to provide additional comments on the documents received at this meeting, the documents to arrive shortly, and the species accounts at or before the next scheduled meeting.

On August 1, 2000, the Service received the analysis of effects of the covered activities for the remaining seven of the eight species groupings being proposed in the HCP approach and a tabular matrix of the effects of the covered activities by species groups and subgroups from IID's consultant.

The Service's draft comments on the following documents were distributed at the beginning of the August 9, 2000 conference call: the covered activities descriptions, the HCP approach document including all species groupings, the effects matrix, and the species descriptions provided to the Service to date. The conference call began with a walk through of the major comments on each of those documents. All individual comments could not be addressed, but the Service offered to provide additional information/clarification as needed. Major comments included the need for greater clarification to connect the individual covered activities included with the requirements of the water transfer/quantification cap. **The need to address the QSA cap was stressed by IID as a new aspect of the scope of the HCP.** The use of a habitat based approach does make evaluation for the internal section 7 on permit issuance and the permitting process in general more difficult. The permit still has to be done in the context of each species' status. The next steps involve quantifying the impacts and determining the extent of the required mitigation. It was agreed that the marsh group and the desert pupfish would be the first to undergo this analysis. It was reiterated that the analysis can be conducted by group, but we must be able to be sure that our approach is adequate on an individual species basis. The species accounts provided require additional detail on project area habitat and project area occurrence in order to accomplish this task. The Service offered to provide copies of examples that have been appropriate in other HCP's. The discussion then focused on system versus on-farm water conservation measures and the potential role of fallowing. The model being developed should allow the potential extremes and the likely impacts to be identified so that the mitigation can be appropriately scaled. The consultant's intention is to look at most likely impacts, but they will also look at contingencies to address the worst case scenario. **Final concerns were that the NOI needs to be published as soon as possible, and the Service will need time to review the EIS before it is published (the current schedule calls for publication in September) given it has to address our NEPA**

requirements as well. The September meeting was canceled as a result of several schedule conflicts.

On **August 15, 2000**, the Service requested an update on the schedule for the EIS and the HCP. As of **August 29, 2000**, no updated schedule could be provided.

On **September 13, 2000**, the Service received notification from IID that they would not be able to meet the January 19, 2001 target date set by the Secretary of the Interior. At that time we were informed that the internal review draft of the EIR/EIS should be ready in the first part of November along with a first draft of the HCP. IID indicated that they should be ready to submit the HCP to the resource agencies by the end of November or first of December. They suggested a tour of possible mitigation sites at that point because they would have a better understanding of what they would be proposing. This was tentatively scheduled for late October/early November. The model peer review team was being set up and their meeting schedule was to be determined at a meeting on September 18. The Service nominated Tim Mayer from the Regional Office. **We were informed at that time that the IID would not require any further meetings with the resource agencies until the submittal of their HCP.**

On **October 27, 2000**, we were informed by Bruce Ellis of the Bureau of Reclamation that they had a meeting scheduled with IID to exchange draft documents. The Bureau was to share a copy of their programmatic Environmental Assessment on the Secretarial Implementation Agreements and IID was to have the Draft EIR/EIS for the transfer for the Bureau. Carol Roberts contacted Steve Knell on **October 31** to see if it would be possible for the Service to be represented at that meeting as a cooperator on the EIS. She was informed that the meeting was for the lead agencies only. A separate e-mail was also received on that date indicating that the model presentation was going to be delayed as a result of the need to complete the HCP and EIR/EIS documents. Bruce Ellis informed Carol Roberts on **November 13** that the Bureau had not yet received a draft of the transfer EIR/EIS as IID had concluded that they needed to complete the HCP first. They were focusing their efforts on completion of that document first so that it could be addressed appropriately in the EIR/EIS.

On **November 6, 2000**, an amended Notice of Intent was published by the Bureau in the Federal Register to address coverage of permit issuance in the draft EIR/EIS. A thirty day comment period followed during which the Service received three comment letters. Two raised concerns about the indirect effects in the receiving areas, and the third requested that tribal trust resources be addressed in the document.

The tour of the Imperial Valley occurred on **December 1, 2000**, with Carol Roberts and Nancy Gilbert attending for the Service. Also in attendance were Kim Nicol, Teresa Newkirk, and Sharon Keeney from the California Department of Fish and Game. The focus of the tour was the nature of IID operations around the valley with stops to observe things like surface and subsurface drain operations, drain maintenance, dikes along the south end of the Salton Sea, and

lateral interceptors/reservoirs constructed as part of the previous transfer to MWD. A stop was made at the Imperial site of the Brawley Wetlands project to show one type of habitat that could be created. There was also a stop at one of the local duck clubs receiving drain water. The group discussed possible measures to avoid impacts to burrowing owls using drains or canals. No specific mitigation sites were identified, but the plan will mitigate for losses of habitat resulting from drain maintenance and degradation of water quality. The consultant also identified tamarisk stands around the Salton Sea shoreline as likely to be lost as the Sea recedes. These will be mitigated with plantings of native cottonwoods, willows and mesquite trees. **At the conclusion of the tour, the Service was informed that the draft HCP should be available sometime between December 18, 2000 and the first week of January 2001.**

On **January 2, 2001**, the Imperial Valley Press ran a story on the water transfer that stated that the IID would begin their negotiations with the Service by **January 15th**. In response the Service requested an update on the schedule on **January 9, 2001** via e-mail. The response received from IID on **January 13th** was that they were in the process of coordinating with the other parties to the QSA (Coachella Valley Water District (CVWD) and MWD), and IID was hopeful that the coordination would be completed shortly. They provided **late February** as the soonest the HCP would be submitted to the Service.

On **January 12, 2001**, the Service's Phoenix Fish and Wildlife Office issued their biological opinion to the Bureau on the Interim Surplus Criteria and the Secretarial Implementation Agreements. This document provides incidental take to the Bureau for their actions on the lower Colorado River that are required to implement the water transfer as part of the California 4.4 Plan. Indirect effects of the transfer in receiving areas were discussed in the document. Incidental take has already been provided in some areas through regional HCPs. Incidental take in areas not covered by regional HCPs was deferred to coverage as future projects are developed.

On **March 5, 2001**, a meeting was held at the California-Nevada Operations Office (CNO) to discuss the IID HCP. The meeting was called by the Bureau's Regional Director for the Lower Colorado River Region. In attendance were: the CNO, Carlsbad Fish and Wildlife Office, and the Sonny Bono Salton Sea National Wildlife Refuge (NWR) for the Service; the Bureau's Lower Colorado River Regional Office; IID, their attorney and CH2MHill; CVWD; MWD; SDCWA; and the California Department of Water Resources. The importance of completing this permitting process in a timely fashion was stressed by all the water agencies present. This water transfer project is considered to be the key to the California 4.4 Plan. A presentation was provided that gave an overview of the project and the HCP that is being developed. The HCP is a habitat-based HCP. The Service pointed out that the HCP will still need to assure that all individual species are adequately addressed if they are to be covered by the permit. The covered activities are to include only those associated with water use activities. General farming activities are no longer included. A list of the habitats to be addressed was provided along with basic information regarding the mitigation. The IID emphasized that the Salton Sea was undergoing changes and that they believe that the transfer project is not responsible for restoration of the Salton Sea. They support restoration, and will contribute towards the efforts, but in the absence of a larger restoration effort

they will implement enhancements in areas focused around the river deltas only. Off-site enhancements for piscivorous birds will also be considered. State and Federal support will be sought to assist with the implementation of these efforts. No alternatives that result in reductions in crop yields (i.e., no fallowing) are to be included in the alternatives as this is deemed unacceptable politically.

The schedule for the project was provided by IID as follows:

March 20, 2001 - draft HCP is provided to the Service and the California Department of Fish and Game (CDFG)

HCP negotiations to be complete in **30-45 days** (if possible)

Draft EIR/EIS in **late June or early July, 2001** (impacts of permit issuance are to be addressed to meet the Service's NEPA requirements)

Final EIR/EIS around **Thanksgiving 2001**

Permit Issuance in 2002 (by January if possible, but at least in time for farmers to sign up for the water conservation program before the summer irrigation season)

Water flowing to SDCWA in 2002.

All agreed that this was a very ambitious schedule.

On **March 20, 2001**, we met in Carlsbad with the IID HCP team. Copies of the document had been provided to the Service and CDFG one week prior to the meeting. IID provided a computer presentation on the basics of the HCP approach. This HCP is intended to address not only the IID-SDCWA conservation and transfer project, but the QSA cap as well. It is a habitat-based approach with the goal of maintaining habitat quantity and quality. Salton Sea restoration is considered an independent activity. IID is offering some "stand-alone" projects to address impacts to Salton Sea species should the larger restoration effort not move forward. Tamarisk scrub issues are tied into what occurs at the Salton Sea because most of this habitat is in shoreline areas. The drain and desert habitats as well as the individual species to be addressed were also discussed. CDFG raised concerns over the use of the 2081 permit to cover unlisted species. IID stated that they were assured from the highest levels in the agency that this need could be accommodated. The Service again raised the concern that there is not adequate time to maintain the current covered species list, and we recommended that our efforts be focused on those species for which there is adequate information to issue a permit. IID countered that their Board is not willing to take on the risk of a new species listing after the project begins. They expressed the desire to work through the individual categories to see if the issues can be resolved before making any decisions on dropping species from the list. We discussed the "flagship species" such as the burrowing owl and the desert pupfish and how outside expertise may be needed to address these species. We briefly discussed the agricultural field species and the lack of mitigation for these species. IID stated that they felt that adequate mitigation was provided by the fact that the transfer project would allow agriculture to continue in the Imperial Valley indefinitely thus providing long-term habitat. Without the transfer, the longevity of agriculture in the valley could not be assured. Lastly, we discussed the monitoring and adaptive management approach. Currently, the program is not adequate to provide for an adaptive management scheme and to support permitting. The frequency of surveys and the specificity of optional management actions

will have to be improved greatly before permitting will be possible. We scheduled the topic for the next meeting (drain habitat) and adjourned.

The group met again on April 2-3, 2001. We started the discussion with an evaluation of the representativeness of the drains studied in the Hurlbert (1997) study. These drains were chosen for other purposes, so we were looking for some verification that they represent the range of drain types occurring in the Imperial Valley. Seven characteristics were identified to be considered in a statistical evaluation of the drains: total dissolved solids, water slope, side slope, main vs. lateral drain, flow (where available), date of last cleaning (of the Hurlbert drains), and water use history. If these drains are reasonably representative, we will use the vegetation analysis in the Hurlbert study. If not, additional surveys in the future would be needed to determine the actual amount of mitigation that is needed for drain related activities. We also discussed the 14' width and determined that its use was acceptable. However, additional diagrams and information will be added to the document to support its use.

Operations and maintenance topics were discussed. Much more specificity is needed in these discussions to provide some cap on the amount of take that would be associated with these activities. Herbicide use is problematic, and the Service will pursue the best means of addressing this issue in the permit (if it is possible). Nothing in the plan addresses habitat loss associated with the change in land use on leased lands. IID is concerned about taking on responsibility for the actions of lessees, but the Service sees this as a potentially significant unmitigated impact. Further discussion will be required on this issue. Construction projects were also too open-ended in regards to take. The contractor agreed to try to re-work this section to make it more clear what the nature of the construction projects will be and what categories they envision as requiring some mitigation. Again, some kind of cap is needed on the potential take. The rails and the least bitterns are driving the mitigation in this group. It was decided that this may not adequately address some of the other species. Also, there seem to be opportunities for avoidance that were not being incorporated into the plan. IID will look at worker education and leaving some vegetation standing when dredging drains as possible avoidance measures. Frogs may receive special mitigation including re-introduction so that a demonstrable benefit could be assured. Some species were moved to other groups. The transients are problematic because it is difficult to establish the take and the benefits of mitigation. Rob Thornton will be providing examples of how these species were addressed in other HCPs. Adjacent wetlands were discussed along with how the monitoring and replacement of these wetlands could be improved, including a focus on maintaining rather than replacing. We concluded with identifying the action items and the topics for the next meeting (pupfish, agriculture related species, and desert species).

On April 11 and 12, 2001, we met to discuss the desert pupfish, desert issues and agriculture related issues. We started with a couple of items carried over from the last meeting. Jim Setmire of the U.S. Geological Survey was contacted for additional information on the choice of drains in the Drain Report. He identified flow, soil type and selenium concentrations as the factors he evaluated in choosing drains. He attempted to represent the range of those characteristics in the study. This information was helpful, but the evaluation discussed at the last meeting would

provide a more thorough documentation of the representativeness of the "Hurlbert" drains. Pesticide coverage was strongly discouraged by the Service's Regional Office given the complexity of the impacts and gaps in data to evaluate impacts. The issue is still open, but coverage would have to be based on use of a very limited range of chemicals, and the analysis would have to address the range of potential impacts that could occur in the species potentially exposed. This would be a significant workload issue for the Service.

The desert pupfish was discussed in order of the items in the conservation program. The first issue of concern was limiting the number of drains considered based on the ability to pick this species up in a survey in the last 5 years. Given the sporadic appearance of this species in some of the drains, this approach was not acceptable. A more justifiable approach is to consider all drains that flow directly into the Sea to be habitat and gear the conservation program accordingly. Avoidance and minimization measures to be carried out as part of the maintenance of these drains need to be incorporated into the program. Maintenance dredging will be conducted at most once per year on the center of the drain leaving the edge vegetation in tact. If that is not feasible due to the width of the drain, only one half of the drain will be dredged in any one year. The appropriate approach needs to be determined in advance and incorporated into the worker education program. The maintenance will also be done in a downstream direction. Exceptions will be identified in advance, and other means will be considered to avoid impacts associated with moving in an upstream direction. The test channel concepts offers some viable opportunities for studying management options. However, the proposal may require a longer time frame to see results, may require more active management to achieve colonization, and may require additional funds to complete these efforts. CH2MHill will try to provide greater detail in regards to what is planned. Time frame is important as we will want access to the information generated before we are too far into the permit period. We also identified the need for a formal concurrence process between IID and the agencies before changes to the program are implemented. We also discussed the possible problems associated with Salton Sea elevation decreases and the possible need to contour channels or recreate shoreline pools. Water quality is a problematic issue given that we currently have no framework for determining the amount of mitigation that is needed. Three constructed channels with operational discharges were offered as a starting point, but we need a better understanding of the impacts to know if this is adequate. CH2MHill will provide model outputs for these drains for evaluation. Other mitigation sites could be used for re-introduction of pupfish to help offset habitat impacts in the drains. For construction projects the goal is one of no net loss. An accounting system will have to be laid out in the HCP with a ledger for potential habitat gains (possibly as a result of lengthening of the drains with drops in Sea elevation) and losses. The last topic we discussed was the possibility that the Salton Sea may become inhospitable to pupfish sooner as a result of the project than would otherwise occur and that this would need to be addressed in the absence of a larger restoration project.

The discussion of desert habitat started with a request to better represent the area being discussed including discussion of the desert interfaces along the East Highline and Westside Main canals (in addition to the All-American Canal). We need some contingencies for emergency repairs to be incorporated into the HCP given that earthquakes, tropical storms, and other natural events are

likely within the life of the permit. We need to incorporate the basics of the worker education program into the HCP, although the specific locations will not be available until surveys are completed. Plant surveys should be conducted when the appropriate meteorological conditions occur rather than on a set schedule. CDFG will develop triggers for initiation of the surveys. Baseline will require a minimum of 2 years of surveys in the right conditions. CDFG stated that they do not conduct salvage and do not consider salvage to be mitigation for covered plant species losses. Permanent preservation will be required. Weed invasion will also have to be evaluated based on current conditions and monitored in the future. Animal surveys will also need to be modified to incorporate a meteorological component. Surveys should be conducted in a stratified random fashion focused on the appropriate habitat for each species. A variety of survey methods will need to be incorporated to pick up the entire suite of species. The list of desert animal species should also include the burrowing owl. The conservation program also needs to include all of the standard avoidance/minimization procedures for the desert species. The agencies will provide a list to CH2MHill. Again, there will need to be a process for reaching agreement on modifications to the program, and a mechanism to deal with cases in which the agencies and the applicant cannot agree. Additional language will be provided to support this need. When preservation is required to mitigate impacts, this must include adequate funding to provide for the management of those lands in perpetuity. IID has the option of purchasing the lands and managing them, or turning them over to land management entity with an endowment to provide funding for management. IID also has the option to restore temporary impacts (to be initiated within 12 months), or to mitigate those losses as permanent.

The agricultural land habitat does not include coverage for farmers' general activities. IID feels that crop changes in response to the need for water conservation are unlikely as these changes are likely to remain market driven. IID is also not planning to pay farmers to fallow their land, so impacts from this should not be considered part of the project. However, they are looking for coverage of fallowing on their lands, and they are evaluating fallowing as a means of water conservation in the EIS/EIR. IID decided that further internal discussion was necessary as they may want to cover fallowing in general. Whether or not fallowing or crop changes are subsidized as part of the program, they do appear to be a possible outcome of the conservation program/cap during the life of the program and should be considered. We need to have more detailed information on all the activities to be covered and how these may impact the covered species.

The last topic discussed was the razorback sucker. IID is relying on the operations biological opinion for coverage of entrainment in the short-term, and the Multi-Species Conservation Plan will provide coverage in the long-term. The MSCP approach is to develop enough habitat that fish reproduction will be adequate to support losses to dams or entrainment. The water agencies do not want to maintain screens. Although the impression was that fish found in the canals were already considered to be "taken", a review of the biological opinion revealed that the incidental take statement specifically excludes live fish from the take. These fish are to be dealt with via a protocol to be defined by the Service. The CDFG has a protocol that has been used in the past. This species is fully protected by the State, and cannot be taken. This will need to be resolved.

On April 20, 2001, IID provided a presentation on their hydrological model for the Imperial Valley. The Colorado River model produced by the Bureau of Reclamation provides the input, and the output of this model can be entered into the Bureau's model for the Salton Sea. All water entering the system leaves through one of the outputs identified by the model. The focus is on consumptive use versus what flows into the drains, rivers and the Salton Sea. IID has very good data on which to model deliveries. Measurements have been made at all delivery points. The drains are not as well understood because there are only a few points that have had any measurements over time. The focus of the model design was the period from 1987 to 1998 as detailed data was available for water use and cropping patterns. Based on testing against historical data, the model predicts total flows to the Salton Sea, flows to the New River and flows to the Alamo River well. Flows in the drains that flow directly into the Sea are not captured as well in the model. Future cropping patterns are assumed to be similar to today. Water conservation is assumed to be achieved by physical means that do not include fallowing or crop changes. The average performance improvement in water conservation was 30%. The on-farm conservation drives the model. However, system changes do tend to have a greater effect on concentrations of individual constituents (e.g., selenium). The model has incorporated parameters to address changes in total dissolved solids, selenium, and boron along with some constituents that are (or were) applied on the farms (DDTs, toxaphene, chlorpyrifos, nitrogen and phosphorus). The model did not identify a relationship between soil type and concentration of the modeled constituents. What was found was a relationship (inverse) between flows and concentrations of trace elements. The model is based on mean concentrations. Although this was not deemed to be an issue for selenium, it could be a concern for chlorpyrifos and nitrogen (specifically that in the form of unionized ammonia). IID felt that applications of pesticides and fertilizers are likely to go down with water conservation. Overall, the presentation was very helpful.

The meeting on April 27, 2001, was focused on the drain water quality and the approach taken to develop mitigation. We started the meeting by reviewing the assignments still pending in the HCP revision. Many issues remain to be resolved in terms of the role of fallowing and what will be addressed as unforeseen circumstances. In order to facilitate the discussion of water quality, Harry Ohlendorf of CH2M Hill and Joe Skorupa of the Sacramento Fish and Wildlife Office participated in person and by phone, respectively. Joe had several questions which we discussed in the order that they were presented in the document. The major concerns he raised were:

- The use of 5 µg/L Se or the concentration in the incoming water, whichever is greater as a criterion for the water quality in the created marshes presents two major problems. The level of 5 µg/L Se may not be adequately protective of wildlife and is being evaluated by the Environmental Protection Agency. This concentration as a water quality criterion in the California Toxics Rule constituted a jeopardy for the California clapper rail. Similar concerns exist for the Yuma clapper rail. The other concern is that this does not present an upper limit on the Se concentration. IID was concerned that they might be limited in terms of the concentration of the incoming water from the Colorado River. While this concern is justified, it does not change the fact that we need to be able to analyze the

impacts of the HCP and determine if mitigation is adequate. This cannot be done if water of adequate quality cannot be assured for mitigation habitat. A concentration of 5 µg/L Se is only acceptable with substantial monitoring for wildlife impacts. A concentration of 2 µg/L Se is preferable. Given the scale of the mitigation, pre-treatment to this level should be feasible. IID was concerned about making a commitment to treating to this concentration given that the concentrations in the Colorado River could not be assured.

- Impacts other than hatchability have not been addressed. Other things that should be considered are post-hatch effects, immune suppression, and body condition.
- The applicability of the formula to this situation needs to consider that the relationship was developed for ponds which had reached an Se equilibrium and were very stable in terms of Se concentrations. Although this is probably the best basis we have, the conditions in the valley are going to be much more variable. If the invertebrate concentrations in relation to the water concentrations are similar to those found in the ponds where this was developed, it is reasonable to use this approach in the Imperial Valley.
- Because this relationship was developed for stilts, it may not be appropriate for the covered/listed species if they are more sensitive. It would be prudent to look at the relative sensitivities of different species provided in the literature to determine if a safety factor is needed.
- The use of a percentage of habitat for mitigation may not adequately address potential accumulative effects (i.e., it assumes zero additive effects over time). Specifically, the demographic assimilative capacity of the population has to be able to tolerate this potential loss over the term of the permit. The most protective approach is to mitigate 100% where there is an impact, thus addressing the entire drain population. An alternative is the use of a safety factor and include a higher acreage of mitigation. This could be scaled back if monitoring indicates that less is required to achieve the same goal. Otherwise, a mechanism is needed to add to the mitigation if the monitoring indicates such additive effects may be occurring.
- It is not clear what opportunities we have to promote recovery within the HCP. For some species we are dealing with a significant portion of the range, and this is an important consideration. The HCP should not preclude and should contribute to recovery. IID does not feel that they have a responsibility to recover species, but they acknowledged that the wording in the document could be improved.
- A basis for the acceptable numbers being within 25% of the baseline surveys should be provided.
- Overall, Joe recommended taking a conservative approach and designing mitigation around the worst case. This is the best way to determine long-term costs up front. IID was concerned that the use of worst case, while providing for a maximum long-term budget, would ultimately be a deal breaker as the costs would run too high. Given that the chance of needing additions in mitigation above the current planning for most likely impacts is high (Joe estimated 50% relative to the contaminants impacts), the current burden on the Service for addressing those changes appears to be too high.

Some additional comments were provided by the Service including the fact that covered species use of open water in the drains was not addressed. Also, the language discussing the mitigation ratio is inappropriate given that we are using a probabilistic multiplier. CH2MHill agreed to reconsider that language. We scheduled the topics for our next meeting and adjourned.

On May 8, 2001, the group re-convened to discuss issues related to burrowing owls and bats. CDFG was concerned that the proposed strategy does not incorporate their protocol for addressing burrowing owls. Strategy Owl-2 was of particular concern because of the reliance on the operators for locating burrows. There are several specific requirements of their protocol that IID felt would impact their ability to maintain their operations. CDFG will confer internally to see what flexibility they have to deviate from the protocol in an approved HCP. IID emphasized that they must be able to address drain flow problems, although they do have some flexibility to modify their techniques to minimize the likelihood of impacts to owl burrows. This is important given that they are moving in a direction of only doing maintenance where there is a specific request to do so to minimize impacts of the cleaning operations valley-wide. The Service recommended that they consider addressing the two groups of owls that are present in the Imperial Valley. There are breeding birds for which protection of the occupied burrow complex is paramount, and there is an influx of birds during the winter whose use of burrows is more variable providing greater flexibility. "Fallback" of dredged material into the burrows was identified as the most likely impact. IID felt that this could be avoided by having excavator operators modify their movement patterns around burrows. A worker education program would be needed to implement this aspect of the HCP. The approach that was recommended is to have a full time biological monitor that will be charged with conducting breeding season surveys that will be focused on areas IID expects to be cleaning that year. The monitor would survey and mark burrows so that they can be avoided by operators. IID offered to have operators drive by the drain to be cleaned on the side opposite of the equipment movement path to maximize the chance of identifying burrows that need avoiding. The Service recommended providing burrows the maximum buffer allowed by the equipment. All agreed that we would like to maximize avoidance of burrow impacts, but we are looking to ultimately sustain a population of burrowing owls in the Imperial Valley. This will require an adequate level of monitoring including surveys and banding to obtain a better understanding of how burrowing owls use the Imperial Valley. In addition, we need to lay out adaptive management options as part of the HCP to address any shortfalls in the proposed strategy. Possibilities include the addition of artificial burrows in areas where these may be limiting, a change in maintenance practices, or changes in land use on IID land to promote burrowing owls. Additional aspects that IID needs to consider include: canal maintenance can also impact owls and needs to be addressed, a farmer education program may provide benefits to the owls in areas that are outside their jurisdiction, and they need to consider the owl's generation time when developing the monitoring program (it takes 6 years to get to a sample size of 1 in terms of the population). In addressing the construction impacts, a 2:1 ratio of replacing each impacted burrow (or 5:1 or greater on a per pair basis) was deemed acceptable. The potential impacts of these projects needs to be quantified (at least a cap). IID felt comfortable that construction activities could be scheduled outside the breeding season. Emergencies will be dealt with elsewhere in the plan.

Bats are very difficult to address because there is so little information. The Service is in a difficult position because we can't define what we would be permitting. IID needs to conduct the appropriate studies to lay out how the bats proposed for coverage use the HCP area, and they need to provide an evaluation of the impacts of IID's activities. This requires a better definition of the covered activities. The HCP also needs to incorporate a system of checks and balances to identify what will be done for each potential conclusion that comes out of the studies. IID needs to understand what costs are associated with this process before they are willing to approach the Board with the possibility of removing bats from the covered species list. We discussed the possibility of some sort of conditional coverage, but this has been problematic in other HCPs. It would be better to either remove them from the list or commit to the appropriate actions to justify coverage. IID should investigate if there are opportunities to include a pro-active approach whereby they would incorporate actions that would benefit the bat species within or in the vicinity of the HCP area such that a stronger argument could be made that coverage is justified. The bats also need to be addressed on a species specific basis as some species needs are different from others. The group agreed to the following approach to address bat coverage: CDFG will work with CH2MHill to identify a list of bat experts in California. CH2MHill will organize a "bat summit" at which the experts would come together to discuss the best way to address bats in the HCP. In preparation for that meeting, CH2MHill will develop a better defined list of activities that could impact bats and a list of potential interim measures that could benefit the species while a study is conducted to assess bat use of the Imperial Valley and better define the potential impacts of IID's activities. The experts would be tapped for input on the interim measures and study design to meet the needs of the HCP.

On May 14, 2001, IID hosted a tour of several drains to discuss surveying the drain system vegetation. CH2MHill decided to complete a survey rather than taking the time to further evaluate the "Hurlbert drains" when the outcome was likely to indicate they weren't representative of the drains as a whole. Staff from the Carlsbad Fish and Wildlife Office, the Sonny Bono Salton Sea National Wildlife Refuge and the CDFG were in attendance. CH2MHill is committed to surveying all 1,400+ miles of maintained drains. This will include spillways that are maintained for storm run-off as well as the irrigation drains. Some areas that function to allow drain water to pass through them but are not maintained will not be surveyed. However, these areas should be discussed in terms of what emergency actions may be required in these areas, what impacts could result, and how these impacts will be addressed. The surveys will be conducted by segments as determined by the lay out of the drain. Within each segment the width of the vegetated portion will be estimated less the open water. If there is an obvious demarcation or difference in vegetation between the wetted portion of the drains and the banks, these will be totaled separately. The California Native Plant Society relative abundance categories will be used, and an effort will be made to have totals add up to 100%. The following vegetation categories were identified: bare ground, herbaceous ground cover, salt cedar, cattail, bulrush, common reed, arrowweed, docket, salt bush, willow, mesquite, and sedge. The surveyors will not be looking at vegetation height. Vegetation width will be recorded as horizontal width for two reasons: to facilitate the survey process and to allow for the use of aerial photographs should some areas not be accessible. This was deemed acceptable given that the mitigation habitat will be of better

quality to offset estimates that reduce the quantity. Dead or dormant vegetation (except ground cover) will be counted and its condition noted. It was agreed that by surveying the entire drain system, all stages of maintenance should be covered.

The group had originally scheduled a meeting on June 7 and 8, 2001. This was later re-scheduled to **June 5th** to better accommodate the resource agencies' schedules, but was **cancelled by IID** on **May 29th** to allow CH2MHill more time to prepare document revisions. This revisions were scheduled to be provided to the Service and Fish and Game by close of business on June 1st. The **revised covered activities text was provided** by Sandy Taylor of CH2MHill on **June 4th** via electronic mail, and the **revised desert pupfish strategy was provided** by David Christophel (also of CH2MHill) on **June 13th** via electronic mail.

Our next meeting occurred on schedule on **June 15, 2001**. The agenda included a discussion of the revised covered activities, the revised desert pupfish strategy, and a review of the project status and related activities. As a result of the short review time provided, the resource agencies asked that an in-depth discussion of the desert pupfish strategy be deferred until the next meeting. We support the goal of increasing the available pupfish habitat, but the monitoring and accounting system must be of adequate detail to measure actual habitat parameters as shifts of habitat with a decline in sea level may occur. We did discuss the revised covered activities section in detail. More detail will still be needed to clarify exactly who will be covered for what activities. Because the constraints on fallowing only apply to the IID-SDCWA water transfer, IID now considers fallowing to be a viable part of the overall water conservation program. Fallowing may be used to meet the transfer of water to CVWD or MWD, or it may be required to pay back an overrun. Permanent and rotational fallowing of up to 60,000 acres may occur. The inclusion of duck club and recreational activities requires a clarification as to how this relates to water conservation. Changes in land use also needs much more specificity before the language is acceptable. Caps on the impacts associated with all activities will need to be provided in the revision of the impact analysis. We will provide information on current management for habitat areas as guidance for the development of a more specific discussion on this topic. The group acknowledged the need to lay out what will be considered a major vs. minor amendments and the process that will be required for each. This applies to many of the activities that cannot be discussed in detail at this time because of the inability to predict what new technologies may be available in the future. Experimental projects are problematic given the level of detail available at this time. We will need to evaluate what aspects can be covered by concurrence vs. those that will require an amendment to the permit. Emergency response actions also require a more detailed discussion in the document. While IID may not have a detailed response plan to form the basis of this discussion, they will provide more detailed information on the types of activities they anticipate could occur in response, to the most likely emergencies (i.e., earthquakes and tropical storms and the resulting damage).

The group met again on **June 28-29, 2001**. The first item on the agenda was the revised pupfish strategy that had been carried over from the last meeting. We began with a review of photographs that had been taken of the drains that flow directly to the Salton Sea. There was

some diversity in the width and configuration of these drains that does seem to warrant including more than one approach in the avoidance and minimization procedures. It was decided that a site visit would be an appropriate forum for discussion these issues. It was also agreed that exceptions in the timing of cleaning would be limited to those required to prevent damages due to flooding. The funding provided for Pupfish Strategy 2 is being used to define a level of effort associated with this study, and we were asked to consider this a place holder at this time. A different figure may be provided in the future as we better define the exact nature of the data collection efforts. Pupfish Strategy 3 is designed to increase the available habitat for pupfish, but not to obligate the IID beyond any limits place on their activities by the Restoration Project. There is still a connectivity issue that needs to be addressed above and beyond the absolute quantity of habitat. The IID is willing to look at possible ways of connecting the individual drains separate from the Salton Sea given that salinity may at some point preclude this movement. The habitat accounting is yet to be finalized. The primary metric will be the linear distance along the drain, but factors such as flow, depth, and channel width will have to be considered in determining if all areas of these drains will be considered pupfish habitat. The ultimate measure of suitability will be the occupation by pupfish as measured in their effectiveness monitoring. There will be similar issues at the drains in the north end of the Salton Sea. IID intends to contact the Coachella Valley Water District on this issue. Water quality in these drains, particularly in regards to selenium, has yet to be resolved. We are still waiting the results of the modeling for these areas. IID decided to delete Pupfish Strategy 4, but this type of approach may need to be re-considered pending the outcome of the modeling. Should contaminant levels rise too high for pupfish reproduction, some means of excluding them from contaminated habitats may be required. There may be limitations based on the amount of canal water available in some areas. Another issue came up in this discussion, and that was the life of each strategy. Their intention is to conduct these activities for the life of the permit (not in perpetuity) given that they cannot predict whether the transfer would be renewed or cease at that point. This is very unusual, as most HCP mitigation actions are in perpetuity. Also, IID needs to consider such changed circumstances as a major cessation of farming activity in the Imperial Valley during the life of the permit. They will consider these aspects in more depth. Pupfish Strategy 5 will be modified to reflect that there will not be surveys to demonstrate absence; instead, all activities in potential habitat will include the avoidance, minimization and mitigation measures.

There were two new general commitments in the HCP introduced at this meeting. One was for a full-time HCP implementation biologist, and the other was to arrange for a technical advisory committee to be formed. Given that the membership of the committee is to include the IID, CDFG and the Service, the HCP Implementation Committee was deemed to be a better name. This leaves open the possibility that scientific experts could be brought in to provide support on specific implementation or monitoring issues.

The Burrowing Owl and Desert Strategy revisions were not received until June 26th. This did not provide the resource agencies with adequate time for a full review, so CH2MHill provided the group with an overview of these two revisions. The general comments that were offered by the agencies included the need for a cap on impacts to burrowing owls and identification of the

parameters that will be considered in developing burrow banks. CH2MHill will attempt to develop a set of guidelines that will be used to determine when burrows compromise the integrity of the canal linings. These strategies rely on the HCP biologist to develop a good sense for where owls can be found in the valley to appropriately coordinate the proposed activities. Site specific construction plans with avoidance and minimization measures for owls are to be incorporated into construction projects. **This discussion is being carried over to the next scheduled meeting on July 6, 2001.** The desert strategy was also reviewed with some specific comments being provided by the resource agencies. Not all items from the previous discussion have been incorporated into the revised text including a diagram of the right of way lay out along the canals, a quantification of the maximum impacts anticipated, a discussion of the types of emergency actions that may occur in this habitat, burrowing owls should be included among the species in this habitat so it should be clear that those strategies will apply when appropriate, and the coverage for the use of the old canal (once the new one is constructed) is not clear. There are species in the HCP that were not covered by the consultation process on the lining process, and we need better information on the activities and associated impacts before they can be covered. Also, no State permit was issued for the project. The timing of the monitoring could allow for impacts to occur prior to surveys being completed. Surveys will need to be phased such that no construction occurs prior to the surveys for the area and so that clear progress is being made on the surveys throughout the three year period allowed for completion. Appendix C, which provides species-specific avoidance and minimization measures, will eventually be expanded to include all of the covered species. **This discussion will be continued at the meeting scheduled for July 24, 2001.**

A lengthy discussion ensued on the legislation that is being developed to support the Salton Sea enhancements that IID has proposed to meet their mitigation obligations. The Salton Sea Authority approved supporting the legislation (in addition to ongoing restoration planning). The funding request includes \$60 million for Salton Sea enhancements and nearly \$60 million for reservoir projects associated with the All American Canal lining. The draft HCP would be part of the legislation package, and it would be deemed to comprise full compliance with the Endangered Species Act. The implications for our planning process are not yet clear. The driving concern to this legislation are the benchmarks required by the Interim Surplus Criteria. Any funding received for the Salton Sea will be rolled into the restoration if that project moves forward within 5 years. Otherwise, the funding would be used for the enhancements proposed in the HCP to meet all obligations associated with water conservation driven changes in the Salton Sea. IID would like to continue to work with the resource agencies on these proposals. If these are not acceptable, work on this aspect of the HCP will not continue. They will forward a copy of the legislation as soon as it is introduced and available.

The group met again on **July 6, 2001**, to complete our discussion on burrowing owls and to begin a discussion on monitoring under the HCP. We began with burrowing owls. The focus of the HCP strategy for burrowing owls is on activities that could collapse or close off the burrows. The strategies in the HCP are designed to avoid and minimize the occurrence of burrow collapse and closure. Acknowledging that there would still be losses, the HCP need to promote recruitment

such that reproduction can balance losses. The greatest difficulty in this revolves around IID's limited ability to address factors other than burrow number. IID is willing to implement actions on their land, but this was offered as part of an adaptive management approach rather than as a proactive means to promote owls. Subsidies to farmers to grow crops that are beneficial to burrowing owls was another means recommended to address this limitation. Changes in crops over time may impact burrowing owls, and this should be considered under changed circumstances. Drain cleaning was clearly addressed by the strategy, but aspects of canal cleaning may also have impacts and should be addressed. The strategies do call for much greater interaction between the crews in the field and the biologist. IID did commit to having an interim worker education program developed in 6 months. The resource agencies are still looking for some kind of cap on the impacts (e.g., number of burrows and miles of canals and drains affected in a year). Some creation of burrows is being offered up front, but it was not clear what categories of activities were to be covered. Clarification will be provided. Given the cap on spending once permitted, it is important that the number of burrows provided meets all of the needs intended. Several issues were raised in regards to monitoring. The monitoring needs to be able to detect change such that actions can be taken in a timely manner. The monitoring approach needs to be defined. Are we measuring numbers, reproductive rate, both, or something else? The overall goal is to sustain the population. The first objective is to maintain the existing distribution and abundance of burrows in the area. There is a gap in our understanding of the habitat parameters required by owls. If this could be resolved, we can use the monitoring to identify adaptive management that needs to be implemented. This adaptive management would include the second objective which is to maintain other biological factors required by burrowing owls to the extent possible given IID's land and other resources.

In our discussion of monitoring, the main focus was the need to develop the right questions to be asked. Given the time frame we are dealing with, the frame work for monitoring needs to be developed quickly. Several meeting dates were scheduled. Not only do we need to develop the appropriate questions, but we need to develop the parameters to be measured and the techniques to be used as much as possible in order to support the development of an adequate monitoring budget. A combination of species specific and habitat monitoring will be used. We also need to make sure we are all using the same definitions for some frequently used terms such as habitat use and habitat quality. The species/groups are: burrowing owls, desert pupfish, bats, drain/marsh species, desert species, tamarisk scrub species, agriculture species, and Salton Sea species. We discussed deferring bats given our current lack of knowledge. IID prefers to defer the Salton Sea species to the last given their lack of flexibility in measures for those species.

The Service, CDFG, IID, and CH2MHill met to discuss burrowing owl monitoring on **July 11-12, 2001**. The goal for burrowing owls was identified as the maintenance of a self-sustaining population of burrowing owls over the current range of the owl encompassed by the HCP area. The primary objective that supports that goal is to maintain adequate burrow availability and community parameters (e.g., burrowing mammals, foraging habitat), to the extent that IID can influence these parameters, at levels to support the initial distribution and relative abundance of owls on lands covered by the HCP and affected by the covered activities. The monitoring

program will include a compliance component in that the biologist will conduct spot checks to assure the avoidance measures (provided in the worker education program) are being implemented. The effectiveness monitoring includes 2 components:

- 1) a relative abundance and distribution survey (RAD) to be conducted annually in April, with 20% coverage each year in a rotating panel scheme if feasible (default is by major "drainsheds"); and
- 2) an intensive demographic study in 2 or 3 sub-populations that will measure productivity and recruitment over a 12-15 year time period (the number of nests to be determined statistically).

IID expressed concern that the level of monitoring was not commensurate with their likely impacts to the owls, but this was deemed necessary to establish the baseline condition of the population. Adaptive management actions will be taken on the basis of the population status as defined by the demographic study or based on a drastic change identified in the RAD. If the cause is determined to be covered activities, the Implementation Team (IT) will work with IID to enhance their avoidance and minimization measures and/or consider constructing artificial burrows in appropriate areas. IID's farmer education program will be of assistance in minimizing impacts from farming activities. IID also raised the concern that they may be held responsible for birds moving away from canals or drains to other lands in the Imperial Valley. Burrowing owls are site tenacious, and the burrows present along canals and drains are likely to be more stable than those in farmed areas. The contingency fund developed as part of the HCP will be available to support adaptive management, and it will include funds to support up to 4 additional years of demography studies. The RAD will be conducted once throughout the entire valley to identify the appropriate areas for demographic studies to be conducted. The Service will provide an example data form. The results will be reported to the Service and CDFG annually, with a final report to follow the demography study and baseline RAD (3 complete surveys).

We continued the discussion by reviewing some of the proposed strategies. It was decided that the burrow bank would not be included as an action, but that it could be implemented as a response to a change in population status. We discussed the education programs. The worker education program will be a structured program, whereas the farmer and public education components would be more focused on providing information. The farmer education materials would focus on farming impacts to owls including pesticide use. The public outreach would be more general and could include periodic mailings of leaflets to all of IID's customers.

Nancy Gilbert and Carol Roberts traveled to Sacramento for a meeting on July 17, 2001, of the water agencies with the Director of the CDFG. High level managers and legal representation were present from IID, SDCWA, CVWD, and MWD. The primary topic was the possibility of completing the permitting process for the water transfer, including the Salton Sea, through the CDFG in time to meet the Interim Surplus Criteria and Quantification Settlement Agreement time lines. The water agencies gave some introductory remarks, and identified the delays in the Salton Sea restoration and Lower Colorado River Multi-Species Conservation Plan as major stumbling blocks in the permitting process for the transfer. They were relying on those processes to address the major impacts associated with changes in flows associated with transferring water from

agriculture to urban use, particularly in regards to the Salton Sea. In the absence of the restoration being permitted, they are looking for ways to achieve permit issuance criteria for the transfer relative to the Salton Sea. The water agencies believe that they should not bear the restoration costs as this would not be proportional to the magnitude of the impacts that the transfer will likely cause. They are looking for federal assistance in the form of funding for enhancements for the Salton Sea as well as a truncated permitting process for the Endangered Species Act requirements. The CDFG expressed a strong preference to continue working through the process rather than having the agencies pursue parallel state legislation. The CDFG was also concerned that the funding figure proposed in the legislation would not be enough to offset the impacts of the transfer. The group discussed the possibility of tying the permit into the restoration process in some way, but the water agencies were greatly concerned about the timing given there isn't overwhelming support for the alternative that is likely to be chosen. We discussed the possibility of streamlining the process by reducing the covered species list, but that approach was not acceptable to IID. The water agencies felt comfortable with the progress that had been made on other issues, but they were concerned that the Salton Sea could not be addressed without legislative action. The resource agencies did identify some other issues that are still waiting for resolution. The Service acknowledged that it will be difficult for us to deviate from the 5 Point Policy that requires 90 public review, and the water agencies inquired as to whether the Service could provide guidance on how that might be reduced. The California Resources Agency representative recommended against public outreach prior to resolution of the major issues. The issue of fully covered species under California law was set aside pending state legislative changes that may be forthcoming on that issue.

The Service, CDFG, IID and CH2MHill next met on **July 18, 2001**. This meeting was devoted to focusing the remaining tasks on the high priority species, and then prioritizing those tasks given that the intent is to circulate the Draft EIS/EIR and the proposed HCP on **December 1, 2001**. We prioritized these tasks as provided below:

- Priority #1: Salton Sea Habitat Conservation Strategy
Priority Species - Brown pelicans, white pelicans, black skimmers, gull-billed terns, double-crested cormorants
- Priority #2: Desert Pupfish Habitat Conservation Strategy
- Priority #3: Drain Habitat Conservation Strategy
Priority Species - Yuma clapper rails, California black rails, Least bittern
- Priority #4: Agricultural Habitat Conservation Strategy
Priority Species - Mountain plovers, white-tailed kites, white-faced ibis, black terns, long-billed curlews
Second Priority Species – Hispid cotton rats
- Priority #5: Tamarisk Scrub Habitat Conservation Strategy
Priority Species - Large-billed savannah sparrows, white-tailed kites, yellow-breasted chats, willow flycatchers, yellow-billed cuckoos
- Priority #6: Desert Habitat Conservation Strategy
Priority Species - Desert tortoise, flat-tailed horned lizard, Pierson's milk vetch, LeConte's thrasher

- Priority #7: Bat Habitat Conservation Strategy
- Priority #8: Razorback Suckers
- Priority #9: Colorado River Toad Habitat Conservation Strategy
- Burrowing Owl Conservation Strategy - Done

We scheduled additional meetings in order to address all of these priorities in time to wrap up input on the HCP by the end of September 2001. We discussed briefly concerns over the proposed enhancements for the Salton Sea and the limitations of the funding level in the proposed legislation. In particular, the suite of enhancements do not specifically address our high priority Salton Sea species with on-site enhancements. IID informed us that the amount was deemed appropriate by the bill's sponsors and would not be changed. The bill's language has been modified to allow for increased flexibility as to how the funds are spent. In addition, the bill does not preclude future funding requests for expanded or additional enhancements. CDFG raised the possibility of considering a fish hatchery as part of the project to extend the availability of fish for fish-eating birds and recreational fishing. IID was open to the concept pending an analysis of the term of the benefit in the absence of a full restoration.

On July 19, 2001, the group re-convened (CDFG by phone) to discuss drain monitoring. The key to the approach here is to maintain similar life history functions of the target species in the created habitat that currently occur in the drains. The drain vegetation survey will not be completed prior to completion of the HCP. The previous Hurlbert figures will be used as estimates with the final totals to be determined based on the surveys once completed. The Service was concerned that there needed to be a stated minimum acreage to be provided in the HCP with increases as determined by the surveys to be accommodated in addition. IID stated that they want to be able to adjust the acreage up or down as indicated by the surveys. The Service is reviewing this issue. The approach to monitoring would include point counts for birds, call counts for rails and frogs, and small mammal trapping. The surveys would be conducted seasonally, and breeding use would be assumed if the species was present during their breeding season. Three years of baseline surveys are to be conducted in the drains as the basis for future comparisons.

The wetland creation is scheduled to occur within 5 years of permit issuance. CH2MHill has recommended phasing that so we can evaluate each phase prior to construction of the next and make modifications as necessary. This would require 15 years for construction of the complete wetland habitat package. Following the creation of habitat, surveys will be conducted for 5 consecutive years. Surveys would then be scheduled for every 5th year following this initial period. The group discussed the need for continuing the drain surveys once the created habitat was replaced. Although there are advantages and disadvantages to both approaches, we determined that they would only be continued if the IT felt it necessary to interpret the effectiveness monitoring. Because active management will be required for these habitats, it was decided that a management fund is appropriate here rather than the contingency fund approach taken with the burrowing owl. IID is looking for input from the resource agency land managers as to how best to design and manage habitat for Yuma clapper rails. It was decided that although surveys would be conducted for other species, our management would focus on clapper rails

given we have more information and experience in managing for this species that we do for our other priority species. We will accommodate the other species needs to the extent those needs can be identified and they are not incompatible with managing for Yuma clapper rails. The group was also seeking ways to focus monitoring on habitat elements given use cannot be guaranteed. The group agreed that the appropriate approach was for IID to commit to managing the habitat in the same fashion as the Service and CDFG manage their lands for Yuma clapper rails, and that surveys for this species would be conducted on the same schedule. Should the resource agencies cease surveys, the survey frequency would revert to the schedule of every 5th year following the initial 5 year survey period following creation. IID also agreed to work cooperatively with the Service and CDFG in efforts to optimize management including gathering data on some habitat parameters as part of the survey efforts. Point counts for other species would be conducted on the original schedule (every year for 5 years, then every 5th year).

The group discussed amphibian surveys and determined an approach for lowland leopard frogs. The baseline surveys will be conducted in the drains. If no lowland leopard frogs are found, the surveys will not continue. If frogs are identified in the drain surveys, the created habitat would be surveyed per the schedule. Small mammal trapping for cotton rats will also be conducted along the drains. Herbaceous cover will not be mitigated in the created habitats, but avoidance and minimization measures will be developed if use by these species is found along the drains.

The group met at the Carlsbad Fish and Wildlife Office on **July 24, 2001**. The topic of discussion was the drain strategy. After some consideration of the proposal, the Service raised concerns about how reviewers of the strategy would view its adequacy. The mitigation would replace 20% of the drain habitat and would take a minimum of 5 years to be implemented in which time 100% of the drain habitat would have been cleared on a rotating basis. In addition, this process would be repeated an average of 15 times across the life of the permit. We recommended that IID consider a 1:1 replacement ratio for all suitable habitat in the drains, and we suggested that it would be appropriate to identify a minimum commitment that would be adjusted up if necessary based on the vegetation surveys that are to be conducted in the first year following permit issuance. IID was open to this approach, but they required a cap on the amount of habitat creation they would be responsible for as part of the HCP. Given that the Hurlbert report is the best information currently available, we used the estimate of vegetated acreage derived from that study as our maximum (652 acres). Because of the difficulty in demonstrating absence, the concept of occupied habitat was replaced with what is deemed suitable for the covered species. The Service has in house expertise that could be called upon to assist us in determining which vegetation types of those identified in the surveys are suitable for the covered species. The question was raised as to whether drain species surveys would be required. We determined that it may not be necessary if we are mitigating 1:1, but it would be desirable to have some site specific information on the species habitat use to confirm our determinations of suitable habitat. We will need to agree on what experts would be involved in this determination and identify a process for resolving any disputes on technical issues. The habitat creation could be phased to accommodate any new information developed based on the results of the baseline vegetation and species

surveys. The proposal was to create 1/3 of the habitat at 5 year intervals so habitat construction would be complete within 15 years. This is currently being considered.

The next issue was related to whether this acreage would cover only the drain cleaning activities or all activities in the drains. Given that there is a 100% replacement, IID felt construction impacts should be included in that. The Service concurred with that approach, but it is important that the relative magnitude of permanent (construction) versus rotational (drain cleaning activities) impacts be specified in the document. The basis of our concurrence was the fact that permanent impacts are currently anticipated to be relatively minor. IID agreed with the caveat that any quantification is their best estimate, not a cap. The cap on habitat creation will still apply if they exceed that value. The last issue to be addressed related to the acreage is water quality impacts. The Service will confer internally on whether a 1:1 replacement is adequate to address both types of habitat creation implemented in association with contaminant impacts. The first part of the Service's approach is to provide alternative habitat to attract nesting species away from the contaminated habitat. The second part of the approach is to provide additional breeding habitat to supplement reproduction in the population in an effort to offset reproductive losses among those individuals that forage in the contaminated habitat. We will provide a response as soon as we have had the opportunity to confer with our in-house expert.

The next issue raised was the current ceiling on the selenium concentration in the water of 5 µg/L or the concentration in the source water. This is an issue for two reasons. We have determined that this concentration was a jeopardy for listed species in our evaluation of EPA's California Toxics Rule. Also, impacts have been found in sensitive species due to biomagnification of selenium at this water concentration. If habitat is to be created to offset impacts, including those associated with degraded water quality, it should not then be subject to those same kinds of impacts. IID was not open to the possibility of having to treat water prior to discharging it into the mitigation habitat. Additional discussion will be required on this issue.

Chapter 3 in the document will be re-structured to address these changes. CH2MHill will develop a preliminary determination of vegetation types used by covered species for review to supplement the discussion in the document. IID is working on some text to describe how burning is used in drain maintenance to be incorporated into the text as well. The 84 acres of "adjacent" wetlands will still be addressed separately either through supplementation of the water supply to these areas or creation of replacement habitat. The resource agencies concurred with the vegetation survey approach developed previously. Issues for our next meeting include the need for supplemental mitigation for water quality and more specifics on monitoring and management. IID stated that they would provide a copy of the drain model results to the Service at that meeting.

The group met on **July 27, 2001**, to continue the discussion of the drain strategy. The first topic of discussion was the need for additional acreage to mitigate the impacts of drain selenium contamination. After conferring internally, it is the Service's determination that additional habitat would be appropriate to offset the impacts of the selenium contamination in the drains. The Service has addressed selenium contamination in other systems using a two-prong approach that

includes alternative habitat (the 1:1 drain mitigation would fulfill this need) to attract species away from the contaminated habitat and compensation habitat that provides for an additional increment of reproduction to offset any reproductive losses associated with birds that may still use the drains. The Service supported the approach taken by CH2MHill in their initial development of this acreage. CH2MHill was of the opinion that this was mitigating twice and was unnecessary given that replacement habitat would be for 100% of the suitable habitat (complete take permitted). IID was open to the concept, but they wanted to be assured that this extra mitigation would allow them added flexibility in managing the drains. After a lengthy discussion it was decided that (pending IID Board approval) habitat would be mitigated based on a vegetation survey replacing 100% of the suitable habitat with additional acreage added for selenium impacts associated with on-farm and system conservation. The parties agreed to use 190 acres as a minimum commitment to mitigate for maintenance, construction and selenium impacts. Following the vegetation surveys, this number will be recalculated based on the survey results and the selenium formula developed by CH2MHill. **If this total is less than or equal to 190 acres, 190 acres of mitigation habitat will be created. If this number is greater than 190 acres, additional acreage will be created up to 652 acres (the agreed upon cap).** Measures 1, 2, 4, 5, and 8 will thus be collapsed into a single measure. The text discussion of the methodology will be maintained. IID then suggested that the measure that provided for surveys for construction projects during the breeding season (Measure 6) should not be required as no surveys are required for maintenance activities. Additional discussion occurred whereby the group concluded that it would be appropriate to maintain this measure for projects that resulted in permanent losses of habitat. As these projects are generally scheduled, it should be feasible to schedule them outside the breeding season. IID and CH2MHill will develop language that specifies what projects fall into this category and what construction is considered routine maintenance. The Service requested that this include a quantification of these projects in addition to the definition. CH2MHill requested guidance on how the effects analysis should be presented. The Service suggested that they more completely delineate the effects then follow with an explanation how the measures offset those effects. The current discussion in the document does not adequately address the effects, particularly for our focus species.

We briefly discussed the monitoring approach we had discussed previously. It was agreed that long term surveys would not be needed in the drains. Baseline surveys, for vegetation and covered species, would be conducted in the drains. The created habitat would be surveyed for Yuma clapper rails on the schedule used by the resource agencies (currently annual) but no less than once every 5 years (should the agencies cease to do them more frequently). Management would also be in line with what the resource agencies were doing. CH2MHill requested a copy (second request) of the National Wildlife Refuge's management plan. The Service agreed to contact the Refuge with their request. One management issue that was in conflict with the HCP proposal was the concentration of selenium that would be permitted in the water used to support the habitat. The Service is on record through the California Toxics Rule biological opinion that 5 µg/L selenium is not adequately protective of wildlife. We have recommended that 2 µg/L be used as a maximum in water for wildlife habitat. Given that the Colorado River is the best quality water available in the Imperial Valley, the Service requested that IID commit to using this water

for their created habitat. IID responded that this raises a water rights issue, and they may not be able to comply. CH2MHill recommended that we keep the current standard, but this would be inconsistent with the Service's previous determination. After lengthy discussion, we concluded that it would be acceptable for the restriction to be that: **IID will use Colorado River water, water of equivalent quality to Colorado River water (in terms of selenium concentration), or water with a selenium concentration at or below a selenium criterion promulgated by EPA with a no-jeopardy biological opinion from the Service.** IID will take this to their Board for approval. Several other issues were deferred to the future to be determined by the HCP IT including siting of these habitats. CH2MHill agreed to develop some general siting criteria.

The last issue discussed was the fact that IID had found errors in their drain model report and would not be able to provide it to the Service at today's meeting. They were hopeful that it would be available sometime the following week.

The group re-convene in Sacramento on **July 31, 2001.** The topic of this meeting was the **Bureau of Reclamation's Salton Sea model.** Paul Weghorst from the Bureau's Denver Office gave a presentation on the model including the assumptions that went into developing the model, calibration and verification of the model using historical data, and the predictions made by the model based on four scenarios (including a baseline condition). The baseline incorporates the previous water transfer that was recently completed, a higher salinity level for the Colorado River, reduced surplus flows, and reduced flows from the Coachella aquifer resulting from overdrafts. Salt precipitation in the Salton Sea was included, but the value used for each run was sampled randomly from the entire range of precipitation rates identified by salinity experts. Baseline runs indicate that the elevation and area of the Sea will continue to go down, and the salinity will continue to rise. The two tailwater recovery scenarios evaluated indicate that the rates of change will increase for all three parameters, although the absolute change will not be large in the short term. Conservation by fallowing gave results that were intermediate but somewhat closer to the baseline condition. Mitigation fallowing could be added to this final scenario to allow for increased flows to the Sea that would result in no net increase in the rates of change of salinity, elevation and area over the baseline condition. IID raised concerns over mitigation fallowing in regards to water rights and accepted beneficial uses. IID also expressed concerns with the solar pond alternative for restoration in regards to the location being in conflict with possible mitigation habitat locations. The Service raised concerns over the assumption that 100,000 acre feet of water per year would go to CVWD rather than MWD. If this were not correct, the model might underestimate the magnitude of the changes. The representative from CVWD said that they would be seeking out that volume of water from some other source if not from IID, so the volume assumed to flow to the Sea should be correct. The Service will require some substantiation of that assumption.

The results of the Imperial Valley hydrological model were not yet available to the Service.

Following the HCP meeting, a second meeting was held between the water agencies and the Directorate of the CDFG. The California Resources Agency was represented by Mike Spear.

The group provided copies of the priorities and the schedule we had developed to complete work on the HCP development by the end of September as the water agencies had requested. There are many issues yet to be addressed, and monitoring and adaptive management have to be included. The water agencies re-iterated that **this date was based on a completion date for all QSA requirements of December 31, 2002.** CDFG recommended that work begin immediately on the Implementing Agreement (IA) framework with details to be added later. **The Service identified the need to have access to the draft EIS/EIR sooner rather than later if we are to complete this process in their time frame. IID stated that this should be available soon.** When asked how the Salton Sea will be addressed, IID responded that the approach is based on the approval of Federal legislation. The State did not appear to be interested in working on the HCP in this case given the negotiating disadvantage to them associated with such legislation. The water agencies were still interested in pursuing an administrative solution with the State, but they were not willing to cease their efforts on the Federal legislation given that failure to meet the deadline is not an option for California. Mike Spear suggested that a planned release of the HCP and Draft EIS/EIR on December 3, 2001 does not require Federal legislation. Instead, he recommended that there should be a way for the transfer to be linked to restoration without excessive burden on the water agencies such that a permit can be issued within their time frame. Funding for the enhancements could still be pursued without the override of the Federal Endangered Species Act. CVWD raised concerns over tying the two together given that restoration will likely take some time to be approved by Congress. Mike Spear responded that they cannot be untied biologically. IID wants assurances that the agencies would not come back for additional mitigation in the future.

The Service continues to support going through the normal permit process as appropriate to our fulfilling our mission. Funding may be appropriate to address the water transfer's contribution to the degradation of the Sea. The State would like to see a commitment to restoration of the Salton Sea from all of the water agencies, including the possibility of allowing for conservation. This approach apparently has very little support in the Imperial Valley, and it will take time to get local support for this as part of the solution. The water agencies stated support for the restoration, but not at the expense of the southern California economy. The transfer must be allowed to go forward. The water agencies were not willing to defer the legislation until the next Congressional session stating that there would not be adequate time to complete all of the necessary steps. Also, they need to limit the time frame for legal challenge given the Interim Surplus Criteria (ISC) benchmarks so that aspect will also have to remain.

When asked, IID stated a willingness to consider mitigating for the transfer's incremental effects on the Sea. However, it depends on the specific benchmarks that are used. If a salinity of 50 parts per thousand is considered to be a limit for fish, then the transfer does not significantly change when that will be reached as compared to baseline. We haven't yet resolved what benchmarks will be used. The Service pointed out that there have been previous reductions in the inflows to the Sea that were identified as not being significant and so were not addressed. This is contributing to the current condition of the Sea. CDFG recommended that we focus on restoring the Sea not just dealing with increments because "the Sea is going to die anyway". IID responded

that they will only deal with the effects of the transfer. The State suggested that all need to take some responsibility for the assuring the restoration of the Salton Sea. The water agencies agreed to work with the State on developing language that would link restoration to the transfer HCP to satisfy permitting requirements but be acceptable to the water agencies. The water agencies were essentially offering to commit to promoting restoration. IID is seeking assurances, but only the Service pointed out that only changes beyond those predicted by the model could be considered unforeseen. Changed circumstances like those identified by the model need to be addressed. When the discussion returned to the current schedule, the Service recommended that the process could be facilitated by giving IID staff more authority in the decision-making process and by reconsidering some of the species on the current list. IID did not feel that the current funding cap would provide for all of the biological needs of the HCP. A follow up meeting on the "linkage language" was scheduled, and the meeting was adjourned.

The next meeting was held in the Imperial Valley on August 8, 2001. This was the group's first opportunity to begin the discussion on the Salton Sea strategy. IID requested that we all keep in mind that this program will only mitigate its impacts. IID will not be taking on responsibility for restoration of the Salton Sea. They will only take responsibility for the difference between what will occur with the project versus what would occur in baseline conditions. In the case of fish-eating birds, this is the amount of time the Sea will not be available for foraging to these species as compared to baseline. For discussion we used a benchmark salinity of 60 parts per thousand. Based on the Bureau of Reclamation's Salton Sea model, the Salton Sea would reach that benchmark 9 years sooner with the conservation and transfer program. However, providing for the needs of the numbers of fish-eating birds that use the Salton Sea even for this amount of time is beyond the means of IID. Either we would need to restore the Sea, or we would need to create something nearly as large. There are smaller scale actions that can be implemented, but we need to determine what these should be. CDFG would like to see a hatchery included as part of the enhancement package. They are looking at sport fish and tilapia (which is a species that is easy to raise in ponds) to address the recreational impacts as well as impacts to fish-eating birds.

There are impacts resulting from elevation changes such as loss of nesting and foraging areas. IID felt comfortable with the fact that these are largely engineering issues that could be addressed. They suggested the possibility that shallow shorebirds foraging areas could be bermed and maintained in a flooded condition. They were not as interested in island creation in the Sea given that the elevation may continue to change for some time. Nesting habitat can be provided in a variety of situations including on smaller scales. Small islands could be placed in the mouths of drains and/or in the created wetland habitat to address species such as the gull-billed tern and black skimmer. Shoreline pools should also be considered for desert pupfish. If such pools are not created naturally by wave actions as the Sea recedes, it will be necessary to evaluate the need to artificially create such habitat. Part of this process may be a study of how pupfish use shoreline pools in the Salton Sea system.

There will be impacts to fish-eating species and desert pupfish from changes in salinity. A hatchery may provide for the extension of fish presence in the Salton Sea, but would only provide

a short term remedy. Although fish ponds could be created for fish-eating birds, IID did not like this option given the short term nature of their requirement to supplement fish. They were more interested in off-site projects that could provide more extended benefits to covered species. One of the questions that came out of the discussion was in regards to whether the Salton Sea provides key habitat for any individual species. The white pelican figured prominently in this discussion. We do not have information at this time that would confirm or refute the importance of the Salton Sea as key wintering/migratory habitat for the white pelican. The general approach that is being considered is to: do studies to evaluate the importance of the Salton Sea to fish-eating species, see if restoration is on track to move forward, and choose the enhancements that make the most sense given that there either will or will not be a restoration project. A hatchery would make sense as a temporary bridge to a restored Sea, but it may not be a viable choice if restoration is not expected to move forward. In the absence of restoration, we may be forced to consider off-site mitigation for some species. The Service and CDFG were asked to provide input as to whether the agencies would consider off-site mitigation and for which species. CH2MHill is also looking for input on what specific studies will be needed. The HCP IT would be responsible for determining what response actions are most appropriate given the outcome of any studies and the fate of the restoration program.

The group met again on August 9 and 10, 2001, to tour the pupfish drains in the Imperial Valley. In the afternoon on August 9 the group met to discuss if the strategies as currently laid out made sense. Touring several of these drains provided much material for discussion in the afternoon. It was clear from the tour that there are drains, particularly on the southeast side of the Sea, that are not wide enough to clean and still leave vegetation behind. There were also examples of drains that are left unmaintained because they have adequate slopes to achieve the needed drainage (e.g., Trifolium 19 and Trifolium 1). Several of the measures originally proposed came into question, however. Given the fact that adult tilapia were seen gathered at the mouth of one of the drains, we questioned the appropriateness of cleaning in a downstream direction. Timing restrictions were questioned given that pupfish may bury themselves in the mud during the winter months and thus would not be able to avoid the cleaning equipment. Another concern that was raised was the possibility that dredging only part of the drain would leave the vegetation above the new flow level and would then not provide any habitat for pupfish. The key to determining what is more appropriate in this regard is knowing what the flows will be following cleaning operations. It was undesirable to have these measures result in the need for more frequent cleaning as well. Connectivity and water quality were identified as issues that would need to be addressed. **The model results were not yet available.** We re-aligned the strategies to reflect the discussion. The strategies that remain are as follows:

- Strategy 1 - IID will maintain the existing habitat and increase the habitat as changes in elevation allow;
- Strategy 2 - IID will provide for some connectivity between drains to allow for pupfish movement;
- Strategy 3 - A study will be conducted to determine if pupfish do bury themselves during winter months requiring avoidance of those months of the year for cleaning;

Strategy 4 - Activities that require dewatering will include salvage and relocation of pupfish;

Strategy 5 - Water quality impacts (i.e., selenium) will be examined by the planned Service study and appropriate actions will be implemented such as making highly contaminated drains inaccessible, enhancing those areas with less contamination, and incorporating simple biological treatment systems into the drains.

These strategies will be reviewed at an upcoming meeting and finalized. In addition, we hope to develop a more specific monitoring and adaptive management program at that time.

The group met again on **August 14, 2001**, to discuss the desert strategies. IID felt that they could provide an estimate of the acreage of the rights-of-way in the desert areas and the disturbed areas within those rights-of-way from their documentation and aerial photographs. **This was requested with our initial review and re-iterated when comments were submitted to the consultant on July 19, 2001.** The objective is to provide some sense of scale in the document for the areas that are routinely used in the course of the covered activities. We reviewed the covered activities that were considered to have no effect on covered species and found that there were drains associated with seepage collection that do require maintenance. This topic will be removed from the table and discussed. Additional information will be provided in the discussion of the effects of covered activities to specify the frequency of these activities. The text of this section will also be re-worded to clarify what is meant by each of the covered activities. The discussion will consider the fact that all structures are likely to require replacement during the life of the permit. All activities will be limited to the currently disturbed areas to the extent practicable, and all impacts to desert habitat will be mitigated at a 1:1 ratio. IID felt confident that such impacts could be limited to 5 acres or less. IID will provide a list of the types of structures that are included in construction activities. The lining of the All American canal will not be covered, but maintenance of the existing canal will be included. For the purposes of discussion, the HCP will assume it will be maintained as an emergency conveyance. If IID determines that this is no longer desirable, changes to the use/maintenance of the old canal can be addressed by amendment. It is anticipated that any changes would result in fewer impacts. Management will be in accordance with the Service's biological opinion for the project. Operation and maintenance of the new canal segment will be covered as for the existing operating portions of the canal. Minor changes were incorporated into the strategies and Appendix C to better address specific species needs. Monitoring is planned that will include baseline surveys and presence/absence surveys every 5 years to update the worker education program. Because the program is focused on avoidance, specific effectiveness monitoring has not been identified. Compliance monitoring will be included, however. IID will encourage their employees to report all sightings, injuries and mortalities as part of the reporting process.

The results of the hydrological model were not made available to the resource agencies at this meeting.

The group met on **August 15, 2001**, to complete the discussion of the desert pupfish strategies. A new list of pupfish strategies was provided, but this was lacking any supporting text. It was

decided that the most practical measure of drain habitat for desert pupfish was by the linear distance between the final control structure on the drain and the Salton Sea. As the Sea recedes, there will be opportunities to add other habitat features that could benefit pupfish when these drains are extended. IID committed to maintaining up to twice the current amount of potential habitat based on linear distance. Beyond this amount, no specific maintenance will be provided. However, drain water is expected to continue to flow to the Salton Sea even without specific maintenance (as was seen with some of the existing drain examples visited in the field). Connectivity among the south end drains will be provided for in three subsections: northeast of the Alamo River, between the Alamo and New Rivers, and northwest of the New River. The specific method of connection will be that which is most cost effective given the topography and the drain configuration.

The strategies were re-organized to better reflect the priorities of the program:

Strategy 1 - no net loss of potential pupfish habitat in the drains as measured based on linear distance in the drains;

Strategy 2 - The HCP IT will develop design features for incorporation into the drains that address water quality concerns;

Strategy 3 - IID will take advantage of the receding Sea to increase the potential habitat for desert pupfish by extending the drains and providing for connectivity between them;

Strategy 4 - targeted studies will be conducted to evaluate specifics of the maintenance procedures and identify the appropriate timing direction and extent of maintenance on an annual basis; and

Strategy 5 - Activities requiring dewatering for construction in drains will include salvage of desert pupfish by qualified personnel.

Monitoring of water quality constituents was also discussed. In regards to selenium, collection and analysis of invertebrate prey items offers the most efficient means of tracking exposure in the drains. Turbidity should also be monitored and controlled to the extent feasible. Population surveys will be conducted to demonstrate use of drain extensions and connections. If more effective survey techniques are developed in the future, they will be incorporated into the monitoring program.

The Salton Sea was the topic of the meeting on **August 21, 2001**. A brief synopsis of the proposed state legislation was provided. The proposed covered species of greatest concern in this discussion were the brown pelican, the American white pelican, the black skimmer, and the double-crested cormorant. CH2MHill provided a review of the approaches that they had considered to mitigate impacts to these species. All options were dropped from consideration because of their costs. Based on the Bureau of Reclamation's Salton Sea model, 60 parts per thousand salinity will be reached 9 years sooner with the project as compared to the baseline condition. This threshold is an estimate of the salinity threshold for tilapia reproduction and was agreed to by the group. Some of the assumptions provided in the options discussed were not considered appropriate and should be reconsidered in the analysis. IID requested ideas for alternatives given that none of the options they had explored appeared to be feasible. They would

prefer to identify smaller scale projects that can be permanent (including off-site) that could benefit these species rather than addressing the full number of impacted birds over just the course of the 9 year time differential. They are not considering projects that would address the full number of birds over the life of the permit. The other option discussed was to provide some funding to study these species, better identify the needs that have to be met to mitigate the impacts, and design mitigation actions accordingly in the future. The Service was concerned that this approach was too general to meet the permit issuance criteria. We will need to be able to demonstrate that the benefits offset the impacts, and that cannot be done without at least having some criteria that the future projects will have to meet.

The Service raised the issue of how the transfer might affect the ability to implement a successful restoration project. IID responded that their concern was to mitigate the impacts of the transfer; the responsibility to restore the Sea was with the lead agencies on the restoration project. However, given that on-site, in-kind mitigation is the most appropriate, we need to know what the possibilities are within the Salton Sea area and whether those possibilities need to be independent of a restoration project. IID is currently looking at providing funds towards the restoration or conducting enhancements that mitigate the impacts independent of a restoration project. The legislation is the preferred vehicle for obtaining the needed funding regardless of the option chosen.

To move forward with the discussion, the group agreed to discuss options that could be considered in the absence of restoration, focusing on the 9 year time differential predicted by the model. CH2MHill will look at ways to quantify the impacts. Funding requirements to offset those impacts would then be developed. The current suite of off-site projects provided in the HCP does not specifically address the species most affected by the changes at the Salton Sea. Some alternatives for consideration were provided. We began the development of a list of criteria that could be specified in the HCP for developing projects. Thus far this includes: the location should be in the Pacific flyway, they should offset the impacts of the water transfer in terms of magnitude, and they should provide for the functions and values required by the species impacted at the Salton Sea. The concern with incorporating off-site projects into this effort is that they may be too remote from the location of the impacts to truly offset them. This issue still needs to be resolved.

Issues yet to be resolved as of this meeting include: addressing the habitat and connectivity needs of desert pupfish at the north end of the Sea, drain water quality results (they are due to the office shortly), and a re-write of the pupfish strategy text.

The Service met with management staff from the CDFG in Sacramento on August 22, 2001. The discussion focused on the Salton Sea. The major problem with the approach proposed in the draft state legislation is that permitting is based on the completion of a report that is non-binding in regards to actions taken to restore the Salton Sea. The Resources Agency was concerned that piecemeal approaches would also be unacceptable in terms of fully mitigating the impacts of the water transfer. Under the Endangered Species Act, a report to Congress is not likely to meet the

permit issuance criteria. Taking advantage of the opportunity to encourage a more rapid completion of the Feasibility study is reasonable, but there have to be additional actions to result in meeting the criteria. All agreed that the water agencies should support restoration publically to help increase its chances of success. Concerns were raised by both agencies regarding the 9 years of mitigation being provided for a permit with a life of 75 years. This 9 years may mean the difference between success and failure of the restoration.

The Service was invited to participate in the third meeting between CDFG and the water agencies held on August 22, 2001. CDFG wanted to revisit the species list and determine if there was willingness among the water agencies to drop species from the list. Some species can be addressed by the habitat approach to mitigation, but others are lacking needed information and should be reconsidered. The water agencies asked the resource agencies to provide a list of those species the resource agencies would like to have reconsidered and why. The group discussed what actions were driving the schedule. Although the State Water Resources Control Board action is key, it was not the only factor in the need for completing the HCP by the end of September 2001. The water agencies will provide a clarified schedule that highlights the critical paths. The Service reminded the group that our 5 Point Policy requires a 90 day public review of the Draft HCP and EIS package.

In regards to the Salton Sea and state legislation, the Resources Agency was emphatic that the language be clear that the compliance provided is only for Salton Sea species. The "in-valley" species will go through the normal compliance process as part of the HCP. In the absence of a legislative solution, the water agencies expressed their intention to pursue a determination that impacts to Salton Sea species are not significant due to their temporal nature and do not require mitigation. Both the Service and the CDFG responded that whether temporal or not, the impacts constitute take that must be permitted and so must be mitigated. The water agencies hope to see action on the Federal legislation in September 2001.

A brief follow up meeting was held between the two Federal agencies (**the Service and the Bureau of Reclamation**) and the water agencies. This was an opportunity for the Acting Manager of the Service's California-Nevada Operations Office to express his concerns over the reliance on Federal legislation to resolve the Salton Sea issue. Some alternative approach which meets permit issuance criteria must be developed in the event that the legislation does not pass. Also, reducing the species list will facilitate the process from a workload standpoint. The Service agreed to provide a list of species to be reconsidered and to work with the water agencies in developing sound alternatives that will offset the impacts.

Two copies of the hydrological model results for the Imperial Valley were received on August 22, 2001. However, only the 12 year model runs were provided for the project. The 75 year runs have not yet been made available to the Service. One copy was forwarded on to CDFG. We were informed that the tables for the 12 year runs and the entire package for the 75 year runs will be provided once needed corrections have been made.

The group met again to discuss the Salton Sea on August 29-30, 2001. The first topic to be discussed was how to address pupfish using the drains that empty into the north end of the Salton Sea from the CVWD area. CVWD had envisioned a separate HCP for effects occurring in the north end. Another option offered by the Service is combining these effects with the IID HCP but have separate Implementing Agreements and permits. CVWD had some concerns over the legal ramifications of that approach relative to the QSA. IID explained that the environmental compliance has been separated based on effects associated with conservation of water versus effects associated with the use of conserved and transferred water. IID is responsible for effects associated with water conservation. They stated that they will take the responsibility for addressing these impacts using strategies developed for the south end. **Copies of the latest version of the pupfish strategies were provided (absent supporting text and a discussion of monitoring).** Land ownership was identified as a potential factor that could complicate implementing these actions. IID and CVWD will look at this aspect more closely, although they felt that the connections could be placed below any Indian lands currently under the Sea. We concluded the pupfish discussion with a reminder of the need for IID's actions to be compatible with CVWD's ongoing operations and to accommodate any increases in flows such that the habitat is suitable for pupfish in the extensions and connections.

There could also be impacts to adjacent wetlands and fish eating birds at the north end associated with a receding Sea. IID stated that they are intending to address the entire range of transfer options, including all of the water leaving the Salton Basin. However, the model results provided to date assume the CVWD will be the recipient of 100,000 acre-feet of the conserved water. We will need to see the results for the worst case scenario in order to evaluate the mitigation needs. CVWD concurred that they would not be able to receive any water until they had addressed the effects of use of that water, but they do not want to rely on the on-going multi-species efforts because of the potential for delays to extend beyond December 31, 2002. They are planning a separate HCP to address those impacts. The resource agencies will need documentation of how the responsibilities related to mitigation of the effects of water conservation at the north end will be addressed and how actions associated with receiving this water are not considered interrelated and interdependent. This needs to be provided in the form of a project description that draws the line between activities that are covered and those that aren't covered, and a justification for this separation needs to be included. The documentation also needs to identify where the effects of the receiving of water will be addressed, and all documents need to be available for review when the HCP is released. The Service concurred with the approach to address growth enabling/inducing effects through the regional multi-species plans.

Adjacent wetlands will be maintained or replaced as is called for at the south end of the Sea. The resource agencies identified two special cases that cannot be replaced with wetlands in other locations. These are Salt Creek and San Felipe Creek. The lower end of Salt Creek is occupied by pupfish and has emergent vegetation that has been used by Yuma clapper rails. Because of the pupfish occupation, IID will assure that it is maintained in place, possibly by creating a dam structure that will maintain water levels as the hydrological pressure from the Salton Sea does now. San Felipe Creek requires further discussion as we need to find a way to provide the San

Felipe Creek pupfish population a refugium from flood flows. Currently, pupfish may be washed downstream by floods and could be replaced by Salton Sea fish swimming upstream to re-occupy the marsh. If salinity gets too high in the Sea for pupfish survival, this source could be cut off from San Felipe Creek. We discussed the possibility of creating pockets off the main channel for pupfish use during floods to maintain the San Felipe Creek population in place. IID will develop measures to address these two special cases. Riparian habitat in the Whitewater Channel should not require replacement as CVWD believes these areas are supported by shallow groundwater.

In our discussion of the Salton Sea, the resource agencies expressed their concerns over the lack of appropriate off-site mitigation opportunities. Given fish-eating birds current dependence on the Salton Sea (particularly white pelicans), actions taken off-site would not appear to mitigate impacts at the Salton Sea. Mitigation actions either need to be compatible with restoration, or there could be a lag time to allow restoration to move forward (but this should be tied to the salinity increase and the time needed to implement mitigation). The resource agencies asked for the support of all the water agencies in seeing the restoration move forward. IID requested that we stay focused on mitigation, but it should not be in conflict with future restoration. The resource agencies indicated that it would be difficult to justify a 75 year permit for mitigation actions taken for only 9 years. The mitigation also needs to address a substantial portion of the lost use if it cannot address all losses.

We continued the meeting the next day with a discussion of the categorization the resource agencies had developed for the species on the proposed covered species list. Six categories were included: inadequate information, not present based on existing information, transient species with very limited use, other limited use species, species yet to be discussed, and those conceptually included in the HCP. The Service accepted comments from CH2MHill, and copies of the breakdown will be provided to IID staff at the next meeting. We briefly discussed the agenda for the next meeting with the principals from the agencies. We briefly discussed fallowing, and all acknowledged that this would minimize the anticipated impacts. The Service's preference is to avoid and minimize impacts first and mitigate as needed. With that we concluded the meeting.

Staff from the Carlsbad Fish and Wildlife Office attended **the joint State Senate - State Assembly Hearing on the Colorado River Water Use Plan on August 31, 2001**. The hearing began with a statement by the Regional Director of the Bureau of Reclamation Robert Johnson that provided the history of the California 4.4 million acre-foot apportionment. The Interim Surplus Criteria provide 15 years for California to bring its use down below this amount. **There are benchmarks to meet as soon as December 31, 2002**. The Bureau is moving forward with their responsibilities under the NEPA and the ESA relative to their actions that are part of this adjustment. The obstacles that must be overcome were deemed by the Bureau to be less than those already overcome by the water agencies. Questions were raised regarding the restoration of the Salton Sea and its linkage to the water transfer. The document that describes the alternatives for restoration should be released in the next few weeks. Use of conserved water for the Salton Sea is prohibited as part of the restoration. The primary issue facing the California Plan is environmental compliance associated with temporal impacts to the Salton Sea. The California

Endangered Species Act presents particular problems in regards to that statute's requirement that impacts be fully mitigated. The Bureau is aware of the legislative proposals, but it has no position on this approach. The Bureau is tracking other projects that are part of the California Plan including the linings of the All-American and Coachella Canals. Regional Director Johnson stated that progress was being made, but the decree (Arizona vs. California) will be enforced if California does not meet its obligations.

The four water agencies that are party to the QSA (IID, CVWD, MWD, and SDCWA) then provided testimony regarding their commitment to the agreement but concern over the time frame and compliance with the ESA for Salton Sea impacts. They are looking for legislation that will ease the burden of these requirements so that the process may be completed on time. Congressman Calvert who was invited by the State Committees to participate expressed his commitment to work with Congressman Hunter on his proposed Federal legislation, but he is very concerned about the fate of the Salton Sea. Fallowing as a means of conservation needs to be considered, and the community needs to be educated about the role of fallowing in this process. The Senators raised concern that support for State legislation is lacking, and the Administration has not expressed their support. The water agencies re-iterated their position that the legislation was the only way to meet the deadline. They did point out, however, that they are only looking for relief in regards to the Salton Sea. Other aspects of the transfer will be addressed as required by the laws. The Senators encouraged the water agencies to put more effort into pursuing the fallowing option. Beneficial use of the water could be maintained if it were used for soil leaching prior to release to the Salton Sea.

The Interim Surplus Criteria were also addressed in the hearing, but no additional statements were provided by the water agencies. Additional details were provided regarding storage and conjunctive use projects that will assist the municipal districts during times of shortage. MWD is looking at desalination as a potential option in times of drought. The Senators stated that they were looking for support for legislation from the local representatives and the Administration. In the remaining time, testimony was received from the Center for Biological Diversity and the Sierra Club. Both groups expressed their concerns over legislative bypass of endangered species laws and the potential for growth inducing impacts in the receiving areas.

Following the hearing on **August 31, 2001**, a meeting was planned with the Bureau's Regional Director, the Fish and Wildlife Service's acting California-Nevada Operations Manager, and the Principals representing the water agencies. Unfortunately, **the Principals were called away and could not attend**. IID provided the participants with presentations on the hydrological model for the Salton Sea. Some concerns were raised about the assumptions incorporated into the model, but it is considered conservative in that no changes are assumed that aren't reasonably certain to occur. A short discussion of fallowing followed the presentations as a potential minimization measure that would reduce the mitigation requirements. IID also provided a presentation on their mitigation proposal and cost estimates to address the temporal effects to fish-eating birds at the Salton Sea. The basic unit would be 160 acres and 8 feet deep; the cost for the entire network of ponds to be operated for 9 years is \$3.3 - 7.2 billion. The options for the Sea appear to be limited

to what the legislation would provide, the expensive deep water ponds, or fallowing to minimize the impacts. Concerns remain relative to fallowing in that the existing agreement between IID and SDCWA prohibits fallowing, the community does not support it, and the concerns that the water would not be considered to fall under a beneficial use. The cost of the mitigation is not reasonable in IID's view, but the Service committed to re-evaluating the proposal to see if the costs could be reduced. The species list was discussed briefly after the IID and CVWD Principals had returned, and they were encouraged to reconsider the risk associated with several of the species. Of particular concern for coverage are those species for which adequate information is not available for analysis of the impacts. The Service is working towards a defensible species list. IID committed to taking this question to their Board.

The HCP group re-convened on **September 4, 2001**, to continue the discussion of the Salton Sea. The Bureau of Reclamation was also represented. IID acknowledged the emphasis on fallowing at the Joint Committee and hearing and stated that they needed to determine how to approach this change in direction. CDFG is working on gathering additional data on use of the Salton Sea by fish-eating birds. The San Bernardino County Museum has data from 18 years of surveys at the Salton Sea. We hope that this will provide a better basis for generating the number of birds we need to consider in our analysis. Charlie Pelizza, Senior Biologist at Sonny Bono Salton Sea National Wildlife Refuge, reminded the group that disease issues need to be addressed in any mitigation activities. Botulism is a big problem at the river deltas making these unsuitable locations for mitigation ponds. The ponds need to have adequate flow and drainage characteristics to minimize the botulism risk. We briefly discussed the temporal aspect of the impacts. The Service and CDFG are waiting on legal input in order to provide a resolution on this issue. We discussed the species list and how coverage could be provided for the entire list. The IID Board is not likely to be willing to drop any species. Adaptive elements would have to be developed for each. We also have to consider that it is only reasonable to split the available funding so many ways. Fallowing was discussed, but IID is concerned that it would not reduce the mitigation requirements enough. It is possible to add to the fallowing to free up mitigation water that would bring the changes in the Salton Sea back to baseline. If a credible argument could be presented that the changes with fallowing will be the same as the baseline, no mitigation for fish-eating birds in the Salton Sea would be required. The question associated with this approach was when could they stop doing the mitigation fallowing. It seemed logical that once fish were gone from the Sea, there was no specific benefit to fish-eating birds in continuing this practice. This will also be considered in discussions with the Solicitor. In regards to the 9 year interval, we need to look at worst case (all of the water leaving the basin) if this is an option they want coverage for. We also need to consider the confidence interval around those model results; this increment could possibly be 15 years rather than 9 years. We need to develop an appropriate means to address a temporal impact (9 or 15 years) in a permit that provides take for 75 years. The acreage requirements for an all fallowing approach would be approximately 80,000 acres. Additional fallowing of approximately 30,000 acres will be required for the restoration project. Because IID staff have not been given approval to move forward with fallowing, they have to proceed with the traditional conservation/mitigation approach. They have asked if they could provide mitigation options that would correspond to the different conservation approaches rather

than have a preferred approach in the HCP. This is another issue we will discuss with the Solicitor.

We met again on **September 5, 2001**. The topic of the meeting was scheduled to be tamarisk scrub, but we continued with the discussion of the Salton Sea and species list instead. The Service suggested that they consider the range of model results in developing their mitigation proposal and consider that it will be difficult to permit take for 75 years if the impacts will only occur for 9 years. We agreed that a long term effort makes more sense, but we need to know what is needed for a sustainable population and base the mitigation requirements on that. If fallowing is pursued, we will need to make sure that the strategies developed previously will not be affected. The analysis needs to incorporate these changes in habitat availability, particularly for the burrowing owl. The fallowed acreage would go from an average of 20,000 acres to 80,000 acres. This will likely include both permanent and rotational fallowing. We will also need to consider the possibility of a greater need for things like weed control. The connectivity of pupfish drains also came up, and the Service maintained that the connectivity actions were provided for in the strategy separate from specific impacts of the project to the Salton Sea. IID committed to maintaining this aspect given the "flagship" approach, provided there is adequate space to construct the connections. Mitigation water for the Salton Sea could be routed through the pupfish drains if needed to enhance habitat or improve water quality. The adjacent wetlands should not be affected, and the tamarisk strand along the Sea should be maintained by the availability of shallow subsurface water and the slow shift in the Sea's elevation. In regards to the species list, we need to have a defensible list that provides the resources agencies with assurances that they will be addressed adequately. Given the level of information available for some species, it is not clear that adequate funding will be available nor that appropriate conservation actions can be identified. CH2MHill will continue in their efforts to develop this approach.

We spent part of this meeting with CVWD on their HCP requirements. The Service and CDFG laid out for them what we will need to move forward on developing and HCP for their receipt of the water under the QSA. Several meetings were scheduled. The schedule requirements were not clear as it was not known if their HCP would need to be included in the packet to the State water Resources Control Board (SWRCB). If the time line is the same as IID's, it may be necessary to combine the HCP and NEPA documents with separate incidental take permits and implementing agreements.

On **September 11, 2001**, the group met to discuss tamarisk scrub. We began the meeting with a briefing on several topics including the status of the model 75 year runs. IID anticipates having those available within a week or so. The peer reviews have been requested from the reviewers, but those results are still pending. Thus far, only changes to the documentation have been recommended. The State legislation will not be approved in this session; it is hoped that it will be considered in the special session in January 2002. As a result of a letter from MWD to the Department of Water resources, there was concern about MWD's continued support of the QSA. This contributed to a lack of support for the State legislation which resulted in erosion of some support for Federal legislation. IID is anticipating some changes to the Federal legislation prior to

further consideration. The CVWD issue in regards to their schedule requirements remains, all are hopeful that this can be resolved in the very near future. The IID Board is not open to dropping species from the covered species list unless one of the receiving water agencies is willing to take on responsibility for any future mitigation requirements relative to those species. Discussions on this are expected to continue. The IID Board is open to following as an alternative, but they are not willing to spearhead that effort in the Imperial Valley. They are looking for some other entity to take the lead.

We had a rather lengthy **review of the Pupfish strategy** relative to the addition of the drains at the north end of the Salton Sea. As a result the doubling of habitat will become its own measure, and the connectivity measure will become part of the Salton Sea strategy but its intent will be maintained. One issue that needs review is the presence of Indian land in the north and how this might limit IID's ability to provide for the needed connectivity. They will review the land ownership in the area. The 5 groups of drains to be connected were identified. We also discussed the need for more specificity in the pupfish study measure including the specific questions that are to be addressed by the study and a justification for taking no action at this time. In regards to moving pupfish out of harm's way for construction projects, we concluded that this requires trained personnel. The resource agencies will assist with the development of this training, and IID will have adequate staff trained to meet their needs under this measure. There was a lengthy discussion as to the appropriateness of developing guidelines for the specific actions to be taken, but concerns were raised that each project may require specific evaluation. It is hoped that coordination with the IT will occur as needed. CH2MHill will attempt to develop language that captures what was discussed.

For the remainder of the meeting we discussed **tamarisk scrub**. At the outset, IID wanted to distinguish between tamarisk impacted directly by construction activities and that impacted indirectly by the changes in elevation in the Salton Sea. The activities that may result in removal of tamarisk scrub have not been quantified in the document. IID does not anticipate activities in the river flood plains, but they do expect that most of the impacts will be associated with seepage recovery. The resource agencies will require some sort of estimate (at least a range) to cover these activities. We moved on to the strategy, and IID is focusing on the minimization associated with scheduling the activities outside the breeding season. They are still willing to replace native vegetation at 3:1, but they are concerned about the maintenance requirements if they also have to replace the tamarisk with natives. They provided a new approach which was to provide replacement tamarisk at 1:1, but this was not acceptable given that this is a non-native species that the resource agencies would not want to promote. IID also questioned whether there was really an impact associated with the loss of this acreage given how much was available in the Imperial Valley. It did not appear to be appropriate to dismiss this loss given the life of the permit, the number of species involved, and the potential acreage involved (approximately 500 acres). The resource agencies provided IID with a list of potential acquisition sites and were adjourned for the day. **We continued the discussion on September 12, 2001.** IID is concerned about the cost associated with this approach, and they are looking at a 0.25:1 ratio for acquisition. Such fractional mitigation by acquisition has never been approved in a 10(a) permit in our experience.

All that the Service can support at this time is a 1:1 ratio. We may be able to consider a lower ratio if new habitat is created. IID will consider their options and provide the resource agencies with an approach at a future meeting.

In regards to the tamarisk adjacent to the Salton Sea, IID is proposing to commit to a no net loss approach. The will monitor the stands and can redirect drain or river flows if necessary to maintain the scrub. This could result in shoreline vegetation ending up some distance from the shoreline, however. IID will evaluate the costs associated with an acquisition approach.

We began our discussion of **agriculture** at the same meeting on **September 12, 2001**. The main focus of IID's approach has been that the project results in the continuation of agriculture in the valley, and this is necessary for any of the habitats to be supported. The resource agencies still need an analysis of the two conservation approaches, however. Traditional conservation will result in construction of facilities or changes in field characteristics that are likely to have very minor impacts. Major shifts to different irrigation practices are not anticipated. The only direct impact that was discussed would result from power line strikes with extensions to lines to power pump-back systems. IID anticipated that most farmers would use diesel engines for this purpose, however. IID is willing to flag new lines to make them more visible. Other small-scale harassment impacts were also discussed. Fallowing poses a different problem. IID agreed to do an analysis of the acreage currently and historically fallowed and how this program would relate to those levels. In addition, we identified some key crops/management practices that should be evaluated in this analysis. These are: acres of alfalfa and acres of alfalfa grazed, acres of Bermuda grass (assuming all is burned as part of that crop's management), and the number of irrigation events that would occur with and without fallowing. This will allow us to evaluate the impacts to species using grazed alfalfa, burned Bermuda grass, and flooded fields preferentially.

A conference call was held between the Carlsbad Fish and Wildlife Office staff, CDFG staff, CDFG counsel, and the Solicitor's Office on September 13, 2001. We discussed the policy questions that had been generated by staff with the assistance of IID previously. Several issues were discussed that were then reviewed with IID and their counsel by meeting/conference call that afternoon. The issues discussed and the positions of resource agency legal staff are provided below:

- The HCP can have alternatives, but the Service will only be permitting IID for implementing one of those alternatives. The one permitted will be the least damaging of the feasible alternatives presented. This requires full disclosure of all alternatives presented.
- Mitigation was discussed, and there were concerns over the use of models to determine that impacts would occur only for 9 years when the permit was issued for 75 years. Some alternatives were discussed for approaches to address the continuation of fallowing for make up water:
 - flows to the Salton Sea would be maintained until the fish are gone or for the life of the permit if restoration has maintained the fish in the Sea
 - flows to the Salton Sea would be maintained for the life of the permit

- flows to the Salton Sea would be maintained for the life of the permit with a re-opener if restoration is in place and addressing the problem
- flows to the Salton Sea would be maintained until the fish are gone with a re-opener if restoration is in place and addressing the problem

The Service added that continuing the flows for the life of the permit would be appropriate in the volume necessary to keep the salinity curve at the baseline level given that there are potential impacts to species proposed for coverage that could occur at higher salinities (>60 ppt) as a result of impacts to invertebrate prey items.

- If fallowing is the chosen alternative, the agencies need assurance that the mitigation flows to the Salton Sea will occur even if there aren't enough farmers to fulfill both transfer and mitigation water needs. IID will work with the Bureau of Reclamation to guarantee this water.
- We determined that conditional coverage doesn't really apply to the species for which adequate information is lacking. There may be a mechanism to include those species pending the outcome of future studies, but the resource agencies must be able to remove them from the permit if the information gathered indicates that the HCP is not adequate.
- Temporal impacts are still considered take and need to be mitigated.
- Under the California Endangered Species Act (CESA), the fully mitigated standard requires mitigation actions for the life of the permit. CDFG staff will check to see if spreading the full mitigation that would be required for 9 years over the 75 year life of the permit (65,000 acres for 9 years = 7,800 acres for 75 years?) would be an acceptable approach to address this standard.
- The legislation as currently written seems to require the full paperwork process normally associated with HCPs. IID counsel concurs with this opinion.
- The Solicitor raised concerns about the appropriateness of a separate HCP for CVWD because impacts in CVWD's area would be a direct result of the of receiving water as part of the transfer. IID offered to make completion of their HCP a condition precedent of actual transfer of water to CVWD. The resource agencies will inquire as to whether or not this is adequate to separate the impacts from IID's project.
- The Solicitor was concerned about the nebulous goals of the HCP as currently written.
- Herbicide coverage is not appropriate in the HCP. This activity should be described in the EIS as part of the background, and all use should meet any applicable laws including all label restrictions.
- Minor impacts associated with conventional conservation can be addressed in the permit by limiting permitted take to low levels of non-lethal harassment. This will be provided for specific activities to occur in a specified amount of the HCP area.
- The loss of 500 acres of tamarisk was not considered insignificant and should be mitigated. The resource agencies are looking at the biological value of tamarisk to determine the appropriate ratio.
- The 1600 permit issue with the state has not been resolved and likely will not be resolved in our time frame. CDFG counsel requested that staff consider the requirements of that permit in their evaluation of the drain proposal.
- The Implementing Agreement (IA) needs to be drafted soon, and the Solicitor should

participate in this process. The draft IA should be circulated with the permit application and HCP.

- Service staff need access to the draft EIS as soon as possible. IID will begin providing portions of the draft as soon as they complete their review.
- Monitoring is key in a HCP that relies heavily on adaptive management. We need to get a framework developed soon.
- Changed circumstances will also need to be addressed in the HCP so we need to schedule that topic.

The Service concluded the meeting with a reminder that we need to see the re-writes of the various strategies as soon as possible.

We began the meeting on **September 21, 2001**, by expanding the number of meetings scheduled into October and November. **It is IID's intention to have a complete re-write of the HCP and a draft of the Implementing Agreement (IA) to the resource agencies on November 2, 2001. Chapters of the EIS/EIR should be available in the very near future.** The State legislation will be deferred until January. It is hoped that progress can be made between the State and interested environmental groups such that the language is acceptable when it is introduced. There will be a hearing on the Hunter bill on the Federal side in October. Given the recent events, however, action on the legislation is not anticipated. The Service was not able to provide any estimates on the pond alternative. We have received partial figures, but no comprehensive cost proposal has been possible to date. CDFG has identified to their legal staff what issues are associated with the mitigation proposals that have been discussed. The resource agencies need to meet at high levels to determine what the policy will be relative to the "fully mitigated" and the "minimized and mitigated to the maximum extent practicable" standards. IID will proceed with the alternative they want to pursue using the estimates that they have developed.

The remainder of the discussion focused on tamarisk scrub. The fourth strategy that was proposed in the draft was dropped because IID did not feel that there would be measurable losses associated with the types of maintenance covered in that strategy. These areas are regularly maintained, and any tamarisk present would be relatively small and scattered. Some adjustments were deemed appropriate to the estimated impacts associated with construction impacts covered in the first strategy, but the general approach was essentially the same. As a result of our discussion regarding timing of impacts versus the mitigation and net loss associated with acquisition, IID proposed the following approach:

- For native trees removed in conjunction with permanent losses, native habitat would be created or acquired at a 3:1 ratio,
- For tamarisk scrub removed in conjunction with permanent losses, native habitat would be created or acquired at a 0.75:1 ratio,
- If tamarisk can be created in advance of the impact, native habitat would be created at a ratio of 0.25:1.

For the seepage community associated with the East Highline canal, the situation is more complex because the vegetation is a mixture of natives and tamarisk. We reviewed that habitat values

provided by Anderson and Ohmart in their study along the Colorado River, and the median value would result in a base replacement ratio of 0.5:1. If the same approach is used, this would result in a replacement ratio of 1.5:1 if creation occurred after the impact or for acquisition. IID was looking for a way to keep this ratio at 1:1, and we suggested that they can present this approach. It would not be consistent with the first strategy, however.

The final category of tamarisk that needs to be addressed is the shoreline strand/adjacent wetland tamarisk scrub. It is not clear if this will be impacted as the Sea recedes or not, so IID is not inclined to do mitigation in advance of any sign of impact. The first requirement is to establish the baseline. For planning purposes, the University of Redlands database is the best information we have on the area that could potentially be impacted. IID is willing to do verification, but they are looking for a cap on their responsibility to mitigate in this category. Given that these figures are likely to be conservative, the database figures may be an adequate cap. The net total of tamarisk may not change in response to the project, in which case no mitigation would be required. If changes associated with a receding Sea occur, they could go in either direction. There could be a net increase in tamarisk, in which case IID would like their obligation relative to the other categories to be reduced. The tamarisk could decrease overall, in which case some mitigation would be needed. Replacing the water is not an option here. If the construction strategy was followed, they would implement replacement with natives at 0.75:1. IID inquired if a survey frequency of every 5 years might be enough to allow for planting of mitigation habitat prior to the actual loss of the tamarisk, in which case a ratio of 0.25:1 could be used. The drop in elevation in the first 5 years is expected to be 1.5 feet. **If a restoration project is implemented, it is IID's position that they do not have an obligation relative to changes associated with elevation of the Sea.** We briefly discussed monitoring and tamarisk as the final topic of the day. IID is willing to conduct baseline surveys of the tamarisk itself and to monitor any created habitat to assure that it meets the success criteria, but **they are not willing to monitor for covered species in the tamarisk or the created/acquired habitat because the mitigation is out of kind.** It is their position that meaningful comparisons could not be made. They suggested that the resource agencies monitor the created/acquired habitat given that this mitigation was their requirement.

The group met again on **September 24, 2001**. At this meeting we discussed a variety of topics. We began by looking at photographs of the seepage area along the East Highline canal and discussing mitigation of impacts in this area. We discussed the ratios for tamarisk and the mixed tamarisk/native stands along the canal. The value assigned to the mixed stands was a base replacement with natives of 0.5:1. This is based on the median value for mixed types in the Anderson and Ohmart 1984 study used previously in the canal lining projects. If mitigation is created up front (3 years from planned removal was acceptable to IID), the ratios would be **0.25:1** for replacing pure tamarisk with natives and **0.5:1** for replacing mixed stands with natives. If creation is not done up front or if habitat is acquired for preservation, the ratios will be **0.75:1** and **1.5:1**, respectively. The factor of three helps to offset the temporal loss of habitat associated with after the fact creation or the net loss associated with acquisition.

We spent the remainder of this meeting reviewing the monitoring approaches that have been proposed. The **burrowing owl** approach is acceptable; we are waiting for feedback on the length of the demographic study (somewhere between 12 and 15 years) and the number of nests that will need to be monitored to have acceptable confidence in our results. The **drain** monitoring calls for monitoring of vegetation (relative to the success criteria) and Yuma clapper rails only. The Service suggested that some verification of use by other covered species should also be included. IID agreed to note other covered species seen in the course of the clapper rail surveys. The outstanding issues associated with the **desert** monitoring are the success criteria to be used in re-vegetation and the incorporation of Couch's spadefoot toad surveys in response to thunderstorm activity in the appropriate habitat. The **desert pupfish** monitoring will require an accounting of the linear distance of drain available to them. IID already has figures for the drains in their current condition. Selenium will be monitored in the drains. There will be funds available to look at operations and maintenance procedures to identify minimization measures. No surveys are planned for the pupfish themselves. **Tamarisk scrub** monitoring will include monitoring of the condition of shoreline strand and adjacent stands. There will be monitoring of any created vegetation, and covered species surveys will be conducted prior to construction to avoid taking nests. No general covered species surveys are planned. **Salton Sea** was problematic in that it is difficult to assure that the make-up water is returning conditions to baseline. Such calculations are really only possible if all conservation is done by fallowing. Make-up water would not appear to work as a minimization measure under any other scenario, and it would only be used to address salinity (not elevation issues). Deep water ponds for mitigation would need to meet production criteria, and we would want to look at bird use. We explored the possibility of mixing alternatives temporally rather than spatially (fallow until the fish are gone, then install conventional conservation). IID may pursue this alternative.

On **September 25, 2001**, we met again and review some of the discussion from the previous day's meeting. We began with the Salton Sea strategy addressing **shoreline strand and adjacent tamarisk scrub**. The resource agencies and IID disagreed over the term of replacement habitat management. This is generally done in perpetuity, but IID is looking to implement this for the life of the permit. A monitoring methodology will need to be developed prior to permitting that will provide for an adequate ability to detect change. The resource agencies will also require an outline of the management actions that will be required to implement this strategy. IID is willing to conduct the vegetation monitoring to assure success, but they do not see the need to conduct covered species surveys given the mitigation is "out of kind". Some verification of effectiveness will be required by the Service, and there will be presence data for comparison from the baseline surveys. IID was concerned that not finding covered species would re-open the permit, and the Service suggested that some surrogate(s) species be used to demonstrate that the created habitat was providing for the desired functions and values. IID will develop language to lay out the goals and objectives in habitat terms. The length of the tamarisk monitoring does include the 95% confidence interval. In regards to how to define what mitigation is considered "prior to" the impact, the Service recommended that the definition be based on vegetation characteristics rather than a specific time. Three years was believed to be a reasonable estimate of the advanced planning that will be required, but a tree height/crown diameter or

similar measure would provide a better criterion. This definition may be different for losses from construction (sudden) versus losses from a receding shoreline (gradual).

We also discussed the **Salton Sea mitigation**. IID is planning on putting the 65,000 acres of fish ponds forward as one of their alternatives given the resource agencies have not really given them an indication that less than full mitigation will be accepted. IID has also taken the position that make up water should not be required for fallowing, fallowing provides adequate minimization on its own. IID is also not intending to proceed with any actions in the Salton Sea if a restoration project is authorized. IID is planning to develop a set of strategies that would address the range of impacts that would be associated with conventional conservation, fallowing for conservation, and a combination of both given that the IID Board may allow for some fallowing provided there is a cap. We briefly discussed some of the problems associated with a hatchery to put fish into the Salton Sea.

The Service Staff left that meeting to participate in a conference call (also **September 25, 2001**) between the California-Nevada Operations Office and the water agency Principals. The options they were discussing were deep water ponds for fish, legislation, and fallowing/shallow water ponds. Fallowing substantially reduces the impacts of the water transfer on the Salton Sea, and these could be avoided all together with the addition of make-up water. Water could come from fallowing or some other source, but the duration of the make up water is still being discussed. The Principals were concerned that there needed to be another alternative in case fallowing cannot be implemented in the Imperial Valley. The Bureau of Reclamation suggested that make-up water could be purchased. The Service sees getting us back to baseline as the most logical and least vulnerable way to offset the impacts. We have to permit the least damaging practicable alternative. We are looking for a second alternative, but it must be feasible and meet the Federal and State permit requirements. We discussed a hatchery and dikes around the river mouths, but both of these present additional problems. We also discussed identifying a dollar figure for mitigation, but there must be identifiable actions that will offset the impacts that can be implemented with those funds if a permit is to be issued. The water agencies have concerns that the Endangered Species Act just cannot accommodate their project needs. MWD also raised the requirements of California Environmental Quality Act (CEQA) as being significant as well. They offered a suggestion that the transfer be allowed to ramp up to 100,000 acre-feet while data is collected, and the mitigation will be determined after those studies. Given that fallowing has been implemented in other areas, IID will have to provide justification for not pursuing it in this case. The Bureau of Reclamation questioned if there was a jeopardy involved, but that issue is not the primary one. Without mitigation for impacts to fish-eating birds, the HCP does not meet the permit issuance criteria. IID raised concerns that there will not be broad support for the restoration outside the state unless this transfer moves forward. However, fallowing is an alternative that is compatible with restoration. The water agencies will need the second alternative in two weeks when the legislation is the subject of a Congressional hearing.

The group re-convened on **September 26, 2001**, to discuss the HCP IT. We began by laying out some of the responsibilities of the group. There will be a need for a dispute resolution process.

IID's counsel agreed to provide examples. The Service reminded the group that we cannot abrogate our responsibilities to a voting group. Where decisions focus on permit conditions, the agencies make determinations independently. The suggestion was made that the IT be allowed to function, but the agencies will be given veto authority as long as it is exercised in a timely manner (60 days). The IT will need to formally document their discussions and decisions. CH2MHill will develop a table of all of the measures that provides the specific actions, time lines, and where IT input/action will be required for planning purposes. We also revisited the topic of agriculture as a habitat. The HCP will need to describe the nature and extent of any anticipated impacts. This could be done on a unit system for conventional conservation then estimates of impacts valley-wide could be derived. Specific crops should be discussed in the following alternative focusing on anticipated changes in grazed alfalfa and burned Bermuda grass as these are very important to the mountain plover. Special attention should also be given to the needs of the gull-billed tern given its dependence on agricultural lands for foraging. Nesting habitat needs should also be addressed. Lastly, the monitoring write-up needs to clearly state the goals, objectives, quantifiable measurements that will be taken, and the trigger points for adaptive management. CH2MHill will develop this as appropriate for the habitat being discussed. They see some areas as requiring no monitoring, others will only require compliance monitoring, and still others will require both compliance and effectiveness monitoring. A revised HCP is due to the agencies on **November 2, 2001**.

Staffs from the California-Nevada Operations Office (CNO) and the Carlsbad Fish and Wildlife Office traveled to Washington, DC to provide a briefing to the Acting Director and some of his staff on **September 28, 2001**. The Regional Director of the Bureau of Reclamation's Lower Colorado River Region was present to provide an overview of the history of and agreements involved with the use of Colorado River water in California. While Acting Director Jones' time was very limited, staff was able to relay information on the resources of concern at the Salton Sea. The briefing continued with the Assistant Director for Endangered Species, and we discussed whether the project should fall under section 7 or section 10. A federal nexus exists in the Secretary's approval of the change in point of diversion and the agreements involved in the QSA. Use of section 10 permitting was at IID's request. We discussed the possibility of having two alternatives in the HCP. The following approach minimizes impacts, whereas conventional conservation would require a significant mitigation component. Outstanding issues include participation by CVWD for impacts associated with receiving the water, tribal trust interests have not been addressed, and impacts to the Refuge have not been addressed.

A conference call was held between the Service and the Bureau of Reclamation on **October 9, 2001**. The main topic of the call was **addressing impacts of the water transfer on Salton Sea species through section 7 versus section 10** of the Endangered Species Act. It was determined that a section 7 consultation is feasible given the Federal Approval that it required, and it would involve re-initiating the consultation conducted by the Phoenix Fish and Wildlife Office based on the change in geographical extent of the analysis. This re-initiation would only address the impacts to Salton Sea species and would not include the other species/habitats to be addressed in the HCP. The Bureau sees this as a one-time action that would not likely have a trigger for re-

initiation in the future. A future listing of the white pelican is one issue they hoped to be able to address in the future if the need arises. Consideration of the CVWD portion would be facilitated by conducting a consultation on the Salton Sea as part of this process. The direct impacts from increased flows in CVWD's area could also be distinguished from the growth facilitating aspects of receiving additional water. The greater concern for the Service was that IID may not have an incentive to follow through on the remainder of the HCP if the Salton Sea species are addressed through section 7 consultation with the Bureau. The Bureau assured the Service that they intend to see IID complete the HCP for their operational area. The Bureau is trying to find a balance between reducing impacts to the Salton Sea species and reducing the requirements of the current process. Given the magnitude of the problem, we will ultimately have to rely on the Restoration Project. It is not clear if fallowing will still be considered an alternative in the section 7 scenario. This alternative does minimize the impacts of the project, but it is not popular in the Imperial Valley. The farmers themselves may be more supportive of this alternative, however. We discussed a tentative approach that might be workable. However, the Service recommended that we defer on the section 7 process until after the draft EIR/EIS and HCP have been released for public comment. This would provide feedback on the fallowing alternative and whether or not it is feasible to pursue at this time. The alternative to fallowing in the HCP should include mitigation that IID and the other water agencies are willing and able to implement. We discussed matching mitigation options to the project alternatives. The species list will likely have to be reduced under any circumstances, but we discussed the possibility of developing a conservation fund to address unlisted species that would not be addressed under a section 7 scenario. **The Regional Director from the Bureau of Reclamation and the CNO Manager will be meeting with the water agency Principals to discuss these issues on October 12, 2001.**

Following the meeting on **October 12, 2001**, between the Principals and the Department of the Interior, a conference call was held to discuss with staffs the outcome of the meeting. The focus was on the Salton Sea as the other aspects are believed to be achievable under the HCP scenario. The group is looking for an administrative solution, and much discussion focused on whether section 7 or section 10 of the ESA offered the most logical, feasible approach. The water agencies were concerned that they would be held responsible for the restoration when their impacts are only temporal. Use of the Salton Sea beyond its designation as an agricultural repository should be the responsibility of the government. One problem has been the lack of a feasible mitigation alternative. Those described to date have not been adequately cost effective. Under either approach, the Bureau of Reclamation sees a need to reduce the list of species we are dealing with in the process. However, there aren't that many fish eating birds that use the Sea, but they occur in large numbers. IID saw the section 7 approach as including too much risk given that re-initiation could result in more requirements for them. IID is willing to consider a mitigation alternative, but they stated that more direction was required from the resource agencies as to what the agencies would accept as mitigation. One approach that was raised was the implementation of the on-site enhancements in combination with a conservation fund for white pelicans. It was not clear what the conservation fund would be used for nor what amount would be needed. The Bureau of Reclamation is open to the section 7 approach, but the Bureau is not able to assume all future risk. Finally, the water agencies asked if the project could conserve by

fallowing until all the fish are gone then convert to conventional conservation. There are other potential impacts that should be considered, however, given that this would not bring the project to baseline for the entire permit duration. The Service would not require actions beyond returning the Sea to the baseline condition. We will continue to work with our partners on the restoration for long-term actions to provide for white pelican use.

The working group re-convened on **October 17, 2001**. The Service began the discussion by reiterating that we need a mitigation alternative that the water agencies can implement in the HCP rather than the 65,000 acre alternative that is not manageable. CDFG is working on an approach that will meet their requirements. IID is still considering the concept of fallowing for the project until the fish are gone then converting to conventional conservation. The alternatives in the HCP document may or may not include make-up water depending on the feedback they receive from their attorneys. The Service and CDFG will get together to discuss bringing the two agencies' ideas together into something that can be shared with IID soon. IID is very anxious to receive this feedback; they consider the 65,000 acre option to be a placeholder until something more reasonable can be developed. IID provided an update of their review of the University of Redlands database on adjacent wetlands. Most of these areas are actually managed or will continue to receive water and are not expected to change with the project so this strategy will be dropped from the HCP. **Hard copies of Chapters 1 and 2 from the HCP and the Biological Resources section from the Draft EIR/EIS were provided by CH2MHill.**

The main topic of discussion was **changed and unforeseen circumstances**. CH2MHill has looked at the frequency and magnitude of earthquakes and feels that a magnitude 6.7 quake is the maximum magnitude that is foreseeable in the permit term. The HCP will consider changes associated with this magnitude quake or smaller relative to actions that would be required for the habitats covered in the permit. Of most concern was maintaining delivery of water to the managed marsh. IID felt that this size quake would not so impact their system that deliveries would be precluded. They will consider the managed wetlands to be highest in the priority for water delivery. Other circumstances that need to be considered for the managed wetlands are drought (reducing the water available), invasive species, hazardous materials incidents, flooding/tropical storms, and wildlife disease. In regards to this last issue, we recommended that IID be added to the communication system already developed to respond to wildlife disease incidents. Aquatic weeds could be especially problematic and should be monitored to promote early control. Fire is a concern in the desert habitat, particularly for any areas restored or preserved as mitigation. It appears that most changed circumstances apply more to created/preserved habitats than the avoidance measures provided for most strategies. The Service encouraged CH2MHill to use language directly from the regulations in describing the distinction between changed and unforeseen circumstances. They are no longer considering a percentage difference from the hydrological model as a criterion, and a new approach is being developed that will consider Colorado River quality. For each changed circumstance there will need to be a quantifiable trigger and a response action associated with it. Changes to the species status as well as changes to the habitats need to be addressed.

The burrowing owl strategy is already designed to deal with adaptive management, so IID will need to define what they see as an unforeseen circumstance based on the funding limit on this strategy. Given that a rise in the elevation of the Salton Sea is not foreseen by any of the models, this would be an unforeseen circumstance relative to the measures developed for desert pupfish habitat and connectivity. If this occurs as a result of restoration, the restoration project would be obligated to address any problems. The connections should be located such there is some flexibility to accommodate elevation changes. We need to define in the HCP what water quality changes are change circumstances for the pupfish and will be addressed versus those that are unforeseen. Besides water quality, impacts could occur to pupfish as a result of new exotic fish being introduced, fish disease (e.g., Asian tapeworm), and flooding affecting the drain cleaning frequency. Some basic level of surveys will be required in order to respond to any changed circumstances. To address the potential impacts of pupfish being washed out of the natural tributaries by floods into a Sea that was no longer suitable, it was suggested that IID could set up new refugium populations for those sites. This would be limited if a restoration project is put in place, and it may involve one of the agencies taking on the management of the pond.

The Service Carlsbad staff had a conference call with staff and the Regional Director from CDFG on **October 18, 2001**. The discussion focused on finding a mitigation alternative that could be implemented by phasing a combined hatchery and pond approach. The concept would be to begin by raising fish to stock the Sea once reproduction had ceased but while adults could still survive. As the survival salinity tolerance was reached, the pond construction would be implemented to provide habitat to maintain fish eating birds. The acreage of ponds is based on a temporal impact that is mitigated over the life of the permit. If restoration is implemented during the course of this phased process, funding would be redirected to support the restoration project instead. The basics of this proposal will be presented to IID at our next meeting.

The working group re-convened on **October 19, 2001**. We received a brief update on the meeting between the California Resources Agency and several environmental groups. The focus of that meeting was the California fully protected species. Some progress on that issue was made relative to the Salton Sea and lower Colorado River projects. A brief discussion of the two economics studies being developed by the Bureau and IID occurred. The primary difference is in the assumptions incorporated into the studies. It has not been possible to directly compare the results of the studies to date. The Service raised the issue of addressing tribal water rights. These issue are also depending on the QSA for resolution. The San Luis Rey tribes are to receive their water from conservation resulting from the canal linings.

The remainder of the meeting was focused on the Service and CDFG mitigation proposal. This included the basics of the proposal, how funding could be redirected to restoration if that moves forward, and other actions that should be carried out to minimize impacts to the Salton Sea. Fallowing with make up water continues to provide the preferred approach by avoiding impacts to the Salton Sea, but the mitigation was designed to address the temporal impacts caused by the project on a scale that can be implemented and that would be maintained for the life of the permit. Staff from the Sonny Bono Salton Sea National Wildlife Refuge raised concerns about the wildlife

benefits that would not be maintained at the Sea by this approach. While these concerns are valid, a smaller scale long-term project was deemed preferable to a short-term full scale project. The resource agencies have the option to continue management of the ponds after the permit term has ended. Specific trigger points will be developed that define where funding will be directed based on conditions in the Sea and progress on the restoration project. The Service is focused on addressing fish-eating bird impacts; CDFG would also like to see the loss of the sport fishery addressed by stocking hatchery fish in the Sea. We will also need to address changed circumstances that would apply to the hatchery/ponds. The full scale 65,000 acre option will be moved to alternatives considered but not carried forward. CDFG and the Service will continue to gather information to assist IID in developing cost estimates for the hatchery. Information as to the scale of the facility required is lacking as are operation and maintenance requirements. It is hope that some progress can be made on this effort in the next week. Refuge staff reminded the group that adequate water, labor, and other long term management requirements should be factored into the costs.

On November 2, 2001, the Service received three copies of the new administrative draft HCP via Federal Express shipment. However, the shipment did not include a draft of the Implementing Agreement as expected nor did it include any additional sections of the draft EIR/EIS.

The resource agencies and IID met on November 13-16, 2001. The purpose of this meeting was for the resource agencies to go through the new draft of the HCP and provide their comments to IID. Over the course of the four days, the group was able to go through the first four chapters of the HCP. The HCP did not include the new Salton Sea model results that were updated based on: new figures for salt coming in from Mexico, inflows from the drains that discharge directly to the Salton Sea, and the updated figures for salt precipitation. We briefly discussed the schedule, then went on with our page by page review. We discussed duck clubs and refuges in regards to water rationing. IID is willing to consider guaranteeing water to the State and Federal Refuges as part of the HCP. They determined that the coverage of duck clubs would be dropped. IID was reminded that other activities for the EIR/EIS need to be consistent with their commitments in the HCP. The Service suggested that they include an Executive Summary in the HCP. One aspect which came up in regards to several strategies was the interim period between issuance of the permit and implementing the actions called for in the HCP. IID committed to providing interim staffing of the biologist position, but there may be additional actions required to address this period for some of the strategies. We discussed that the HCP IT should not be a substitute for actions that should be provided in the HCP and that it cannot abrogate any resource agency responsibilities. The Salton Sea analysis needs to include an analysis for each of the covered species listed for that habitat. We discussed the role of the Restoration Program, and IID decided that they would prefer to address this program in a separate section in Chapter 1 rather than try to incorporate discussions throughout the document.

Some additional issues that came up in the discussion include the need for standard language to address conservation easements. We need to define the criteria that allow habitat creation to be considered advance mitigation so the lower ratios can be used. The implementation of measures

for the term of the permit rather than in perpetuity is also an issue that needs to be resolved. IID agreed to discuss the other Salton Sea projects put forth by CVWD and the Pacific Institute in their discussion in the EIR/EIS. What is still lacking in the HCP is a discussion of alternatives to the takings and why they can't be implemented. This includes fallowing for make-up water under the fallowing alternative. In the discussion of the Salton Sea, the question was raised as to whether we have a palatable alternative among the three presented. Given that a demonstrated ability to provide funding is necessary for the permit, we will need to address this issue. The individual species analyses throughout the document need to be checked for consistency, and the document should not overstate benefits and de-emphasize impacts. The lack of detail in the current monitoring and adaptive management plan is still a problem. We need more definitive information on how emergencies will be handled and how they could affect covered species. The Service provided a copy of the Regional Office's preliminary comments. This included the need to reconsider their approach on changed versus unforeseen circumstances as right now most of the potential events are in the latter category. The last problem discussed was that it could be difficult to reconcile one set of alternatives in the EIR/EIS with another set in the HCP. This will need to be resolved. A list of action items was developed, and the group adjourned.

Following the morning HCP meeting on November 16, 2001, a meeting was held between IID and engineers representing CDFG and the Department of Water Resources (DWR). In response to IID's cost estimates for the 5,000 acre pond/hatchery option, CDFG had developed its own estimate for the ponds based on an above-ground approach rather than an in-ground approach as was included in IID's estimate. CDFG's initial cost estimate was on the order of \$10 million dollars for construction of the ponds only. IID was concerned that the two proposals were not equivalent and therefore their costs could not be compared. IID provided several concerns to CDFG staff that were then forwarded to the CDFG engineering staff. The objective in both cases was to get a "pre-feasibility" cost estimate to use in discussions between the water agencies and the resource agencies. There were many aspects of IID's cost estimate or that IID deemed appropriate for the CDFG proposal that were not initially included in the CDFG estimate such as land costs, water costs, armoring on the levees, and pumping costs. The group discussed the need for land costs to be covered if IID owns the land (it is a joint project, and IID should receive credit for this contribution), the difference in water costs associated with use of agricultural fields (has a history of use so water should be available at the agricultural rate) vs. water costs with reclaimed Salton Sea bed (water would have to be conserved to be made available and therefore would cost the conserved water price), and maintenance of a gravity-flow (in-ground) vs. a pumped flow (above-ground) approach. Water delivery costs could be higher if the delivery exceeds the design rate of the IID facilities. The use of drain water was discussed as a cost cutting measure, but this would require additional monitoring and may require blending of delivery and drain water to maintain the appropriate water quality. Additional infrastructure would be required to accommodate this.

As a result of including costs for most of the items included in the IID estimate, the CDFG pre-feasibility estimate was approximately \$175 million for construction and maintenance of the ponds (the associated hatchery costs would be extra). The IID cost estimates, which included estimates

of the hatchery costs, ranged from \$350-800 million. On the low end, the estimates now differ by a factor of 2 rather than a factor of 35.

The group met again on **December 14, 2001**, to discuss the preliminary draft EIR/EIS. We started with a discussion of the schedule for the document and the public hearings. Three public hearings are planned. One issue of concern was the intention to address comments given orally at hearings a general response whereas the Service has always considered oral and written comments to be equal warranting specific responses to both. We continued with global comments on the document. CDFG stated that as their CEQA compliance for the 2081 permit, the document will need to describe the take with species specific discussions that link the potential take with the HCP actions. The HCP alternatives should also be separated from the project alternatives. Operations and maintenance are not describe under any of the alternatives but need to be if we are to use this document as CEQA or NEPA compliance for the permitting of take associated with these actions. The HCP alternatives need to include an alternative to the take. The No Project still includes operations and maintenance and thus would not be equivalent to a "no take" alternative. CDFG stated that the document does need to address fully protected species, and more work is required to analyze the impacts to the sport fishery and socioeconomic aspects of the sport fishery. The document needs to clearly state the purpose and need for the Service in addition to that for IID and the Bureau. The water quality section should be consistent in its use of Salton Sea modeling results, and the assumptions incorporated into the drain water quality modeling should be clearly stated so that the reader can understand such results as the selenium concentrations under all alternatives and the baseline decreasing over recent sampling results.

We discussed the various alternatives for the Salton Sea provided in the Technical Memorandum included with the document. After some discussion it was agreed that the "Risk Sharing" alternative was a funding mechanism rather than mitigation for the Salton Sea and should not be included in the Salton Sea alternatives. The tri-delta alternative is going to be addressed as an alternative considered but not carried forward so that it is at least discussed within the document. IID did not want to delete the 65,000 acres of ponds, but they are willing to use this discussion to guide the reader through the calculations that resulted in the 5,000 acre option. The second Salton Sea alternative will be following. IID is concerned that they will not be able to provide a project level evaluation for these alternatives and may need a supplemental document. It was decided to proceed with the most thorough discussion possible and address the need for a supplemental document in the future. We also discussed the need for a more thorough evaluation of the interaction between the water transfer and the Salton Sea Restoration Project. The Bureau should be able to provide information on changes in the scale of restoration even though the Alternatives document has not been released.

CDFG staff from Blythe joined to discuss the lower Colorado River sections. They had only received a copy of the document on **December 13**, but they had many concerns about it. The document did not incorporate a discussion of measures to comply with the Fish Screening Policy. This is needed to address the take of fully protected species. The change in point of diversion does trigger the need to address this issue. CDFG also felt that issues that had been discussed

previously with SDCWA and MWD had not been incorporated into the project as they had anticipated. The biological opinion developed by the Service's Phoenix Fish and Wildlife Office does address some of the impacts to LCR species, but CDFG does not believe it reduces the impact to below the level of significant. The EIR should address sensitive species as well as those that are required to be addressed under CESA. Their conclusion was that in its current form, the document would not be adequate for CEQA coverage of permit issuance for the LCR species.

On December 17, 2001, the Bureau held a conference call to discuss the EIR/EIS, and the Service was invited to participate. The Bureau's Regional Office did not want the 65,000 acre pond alternative to be discussed in the document. The Bureau's technical staff was concerned about the assumption incorporated into the model that CVWD would get 100,000 acre-feet/year of water even without a transfer from IID. CVWD has stated that they would seek this additional water out should it not be available from IID, but the Service questioned whether that was adequate to consider such volumes to CVWD reasonably certain to occur. Some of the Indian tribes are concerned about power generation losses and various other trust assets. The Bureau is planning on developing this part of the document. Section 1.8 also needs to document the consultation that has been conducted with the Tribes. Consultation on the HCP is still pending. The Service and the Bureau will make an effort to address this issue during the public comment period.

A lengthy discussion ensued over the economic analysis in the document. The Bureau's economist was concerned that the document only portrayed a worst case scenario rather than providing a more modest scenario for job loss based on fallowing of hay crops. This is a very important issue to the Bureau's Regional Director.

The Service raised several issues of concern. A determination of less than significant is not the same as significant but mitigable. These are different and should be portrayed as such in the text and summary tables. There needs to be an alternative to the takings, but the proposed listed species only alternative is problematic. The Bureau would like to see this maintained as a place holder for the section 7 option. The Service would prefer to see a reduced species list for the HCP as we may not be able to permit take of the 25 species that are lacking good information. Transfer volumes are project alternatives rather than HCP alternatives as IID has never offered to reduce their conservation volumes as part of the HCP negotiations. Impacts of permit issuance and HCP implementation should be analyzed in every topic area within the document. This includes economic impacts of fallowing for mitigation water and taking 5,000 acres out of production for ponds. Overall the Service is concerned with the lack of time for a thorough review and the lack of a final review of all changes in the HCP document.

The group agreed that a minimum of two months would be needed for a thorough update and review of the EIR/EIS and HCP. The Bureau acknowledged that the State Water Resources Control Board (SWRCB) petition schedule would not accommodate that kind of delay. Given the schedule we are likely to have many issues to be resolved in the final document. The Service would like to work with the Bureau on presentations for the public hearings.

A second conference call was held on December 18, 2001, that included the Bureau, the Service, IID and CH2MHill. All agreed that the 65,000 acres of ponds should not be a formal alternative, but IID was not willing to remove it from the document altogether. It will be included as background information for the 5,000 acre pond alternative. This alternative will be addressed programmatically given that many details have yet to be worked out. The Bureau wanted to maintain flexibility in how it would be implemented given that the water requirements are substantial. Supplemental assessment of this aspect could result in future delays.

We discussed the need to address the difference between SDCWA and CVWD getting the water, but IID stated that they were using this assumption based on CVWD's position that they will obtain the water from some source. Most of the differences occur after fish are no longer expected to be present in the Salton Sea. The Bureau reminded IID and CH2MHill that the assumptions must be clearly stated so the reader will know what these assumptions are. It would be prudent to be prepared to provide the modeling without this assumption in the Final EIR/EIS given that we don't have a worst case depiction of the Salton Sea under the proposed project without it.

The Service will have our Regional Tribal liaison begin consultation during the public review period with the Indian tribes that may be affected by the HCP. The Service normally addresses the National Historic Preservation Act as well, but this does not appear to be an issue in this case.

The Bureau was very concerned about the lack of evaluation of the fallowing of hay crops only in the socioeconomic analysis. IID countered that they are not going to require growers of specific crops to fallow; the program would be open to all farmers that are interested in volunteering for the program. They have provided the entire range of economic impacts from job gains through construction of water conservation measures to the jobs lost through fallowing of crops in proportion to their production. The Bureau was concerned about inconsistencies between the water transfer and the Restoration Project, but their plan calls for the purchase and conversion of land to solar ponds. They do have the ability to limit the lands considered. IID agreed that it was likely that the least valuable crop would be fallowed, but this is dependent on market conditions. It may not be hay crops that would be considered the least valuable. It was suggested that the discussion focus on the voluntary nature of the program.

We discussed the conclusions provided in the Biological Resources table and the fact that they did not appear to be consistent with the text. CH2MHill staff stated that this issue had been addressed in the updated version. The lack of significance attached to the loss of the fishery as a non-native fishery will be reconsidered.

The HCP alternatives have been modified, and the listed species only alternative is out. The alternatives for the HCP are now the same as the project alternatives. The Service reminded the participants that a "no take" alternative is required, and CH2MHill stated that they would attempt to address this issue in the draft that goes out. Each alternative will have two approaches for addressing impacts to the Salton Sea: ponds and mitigation water. Make up water could come

from fallowing or additional water conservation. The socioeconomic analysis will incorporate the amount of fallowing required for this option. All sections have the HCP impacts incorporated.

The Service relayed concerns that CDFG had expressed at our meeting. IID stated that SDCWA and MWD are working with CDFG to resolve the LCR issues. The species specific analysis of take will not be possible in the draft, and they are working on having that in place for the final document. It was made clear that the Bureau will develop any additional documentation required to implement the LCR conservation measures, and SDCWA and MWD will provide the funding.

We discussed the need to use a baseline that incorporates those actions that will occur on the LCR both in that model and in that input into the Imperial Valley and Salton Sea models. Comparison to existing conditions given the changes that are anticipated is deemed inappropriate by the Bureau.

CH2MHill has identified two additional significant, unavoidable impacts in their analysis. There will be significant, unavoidable impacts to Farmland of Statewide Importance under the fallowing scenario given that rotations of 4 years or more is considered to be conversion under that designation. This does, however, provide IID with the maximum amount of flexibility in implementing the program. No zoning changes are anticipated at this time. They have also identified a significant, unavoidable impact to air quality as a result of fugitive dust from exposed seabed of the Salton Sea. While this is a conservative designation, it is necessary given there are no data to support that such impacts will not occur. No mitigation for this impact has been identified.

Following the conference call on **December 18, 2001**, the Service had a brief discussion with IID on the modifications to the language in Pupfish Strategy 2 that we had recommended to avoid a potential jeopardy for the desert pupfish as a result of selenium contamination. IID expressed the concern that the language seemed to require them to carry out actions before it was demonstrated that there was a problem. The required 4-day average sampling has not been performed. IID provided some changes to the language by close of business that day. On **December 19, 2001**, the Service provided some minor modifications, but the extension of implementation from 5 years to 7 years was maintained. IID responded that while the changes were minor, CH2MHill was no longer accepting changes to the HCP. This will have to be addressed in the final document.

The group re-convened for a two-day session on **January 17 & 18, 2002**. The wildlife agencies acknowledged that both will likely need to provide official comments on the EIR/EIS to assure that our concerns are recognized and addressed. We discussed the need to receive a permit application and what must be included in the package: the HCP, the IA, the monitoring plan, and the actual application itself. This must all be available for public review at some point. We discussed the additional steps associated with processing the permit on the Service's part: an internal consultation and biological opinion, findings, the Incidental Take Permit, and a Record of Decision (ROD). Frequently, the findings, permit and ROD are all signed concurrently. We discussed the necessity of separating the CEQA and NEPA processes given the ROD will not be

completed until late in the process but the State Water Resources Control Board (SWRCB) process will require a Notice of Determination (NOD) much sooner. We discussed the need to reconsider the decision to keep the 25 species for which adequate information is not available on the covered species list. It will require additional work to retain each of these species, and it is not likely that we will be able to provide coverage for these species in the permit. Withdrawal of these species could be incorporated into the Final EIS and HCP documents.

Lianne Ball of the Service's staff gave an introductory presentation on monitoring and adaptive management. She provided a set of definitions that can be used as we continue our discussion of monitoring topics. The monitoring program should be more than just counting individuals. Our goals should drive the development of specific monitoring questions that are then addressed through hypothesis testing. Adaptive management requires that alternate hypotheses be evaluated followed by implementation of the most effective management technique.

We then began a discussion of the drain monitoring in the context of the presentation. CH2MHill provided a flow chart to represent the process for monitoring the created marsh habitat. Although we had agreed to focus on the clapper rail as our "flagship" species in this habitat, we agreed that we should not lose sight of the fact that we are proposing coverage for other species as well. We should consider their needs in developing the creation and management plan for this HCP component. Additional baseline surveys were added for years 7 and 12 to provide for the adaptation of the Phase 2 and 3 designs to up-to-date mitigation needs. The discussion then focused on effectiveness monitoring and how the results of the surveys would be used. Given the differences between the drains and the created habitat, there was some concern over our ability to directly compare between them and set numeric goals based on the baseline surveys. One possibility is to compare surveys of the created habitat to covered species numbers/densities (particularly Yuma clapper rail) on the State and Federal refuges. Compliance monitoring will be needed to demonstrate that IID has met its commitments in terms of the acreage, type and structure of the habitat created. Performance standards for the vegetation will be developed as part of the creation and management plan. These will result in more discrete parameters that can be measured. IID is not comfortable with a numerical goal for any of the covered species, so the group developed a set of parameters that the IT will consider in evaluating the results of the surveys. We identified the need for IID to state what parameters they are willing to adjust as part of adaptive management and what parameters would be the responsibility of the wildlife agencies (under the No Surprises Policy) if future changes were deemed necessary. That information will be provided prior to our next meeting.

We briefly discussed the addition of coverage for entrainment of Colorado River fish (razorback sucker in particular) to the HCP and permits. IID recently learned that this take was not covered by the existing biological opinions between the Service and the Bureau for the lower Colorado River. This is a new aspect that was not addressed. The Service will have to discuss this with the Phoenix Fish and Wildlife Office as they are the lead on lower Colorado River issues.

We discussed monitoring needs for the razorback sucker. This discussion was exclusive of the issue of entrainment. A conservation strategy has been proposed for this species relative to the main delivery canals and associated reservoirs only. The approach is to collect, transport, and release to the Colorado River any razorback suckers found in the course of drawing down the main canals or reservoirs. The monitoring will address fish survival through the collection and transport to the Colorado River. Long-term survival will not be monitored as part of the HCP.

We began a discussion of the tamarisk scrub monitoring. This has some similarities to the drain/marsh monitoring given that the created habitat will differ from the impacted habitat. In this case the structure and the species composition will vary as a result of the requirement to replace lost tamarisk with native species. We have a similar need for IID to provide a breakdown of what they will and will not provide for under adaptive management. We also need to develop a similar process for evaluating survey results here given that the baseline surveys will be conducted in tamarisk versus the native tree habitat provided as mitigation. IID is again concerned about attempts to directly compare the numbers of covered species between the two areas. As for the drains, guidelines for the IT need to be provided in the HCP. To the extent possible, the results of covered species surveys in mitigation habitat will be considered in future acquisition or creation.

The group reconvened on **January 22, 2001**, to develop a schedule of activities based on the various processes that must be completed by December 31, 2002. Most of the scheduling requirements are based on the SWRCB process. This results in a very ambitious schedule at least through the Final EIR/EIS. The ROD for the Service and the Bureau will need considerable additional time to complete the ESA requirements, and the CESA permit also follows the completion of the Final EIR. **The comment period does not close until April 26, 2002, and the NOD is needed by the SWRCB to start their process by June 3, 2002.** The result of these scheduling requirements is a very limited window to complete the responses to comments. **All permits must be signed by December 2, 2002** to allow time for completion of the QSA documents by December 31, 2002. The group will be working from now until the close of the comment period to resolve the remaining agency issues with the HCP (and EIR/EIS). The Service process requires that a Notice of Receipt of Application go out once we have the application package (application, HCP, IA, and monitoring plan). This is planned so that the public review can run concurrent with the last third of the public comment period on the EIR/EIS and HCP. This would need to be distributed to all of the recipients of the EIR/EIS and HCP. One very large outstanding issue is a decision on the approach for the Salton Sea. IID has targeted **May 7, 2002** as a goal for having made the decision.

The group met again on **January 28 and 29, 2002**. The discussion began with the topic of drain habitat monitoring. Compliance monitoring is focused on IID meeting its commitments, but the requirements of effectiveness monitoring are less clear. The drain surveys will only be conducted through year 12, so there will not be an opportunity to compare the drains and the managed marsh throughout the term of the permit. We reviewed the guidelines that were developed for the HCP IT to consider in evaluating the covered species survey results, and the group felt that we were headed in the right direction with that process. Adaptive management will be possible

within the limitations set by funding and the excluded actions to be documented in the text. A cap will also be set for water that will be available to the created habitat. This is of concern because we may not have a good baseline to determine water needs. The Sonny Bono Salton Sea National Wildlife Refuge (SBSSNWR) currently does not manage habitat for the variety of covered species in the HCP. Their current water use would be less than what would likely be required for the created habitat if we include a component for the California black rail because bulrush habitat has greater water requirements than the marsh currently managed for Yuma clapper rail in which cattails predominate. The SBSSNWR also identified some infrastructure requirements that should be incorporated into the design of the managed marsh.

The next major topic in the meeting was the quantification of the take. There will be stated acreages in some cases that can be used to quantify take. This is still problematic given that we have very little occurrence data for the covered species with which to analyze the impacts of that take. In some cases that exact acreage is not clear at this time (e.g., shoreline strand), and in other cases we aren't working with acreage figures at all (e.g., canal operations and maintenance in desert habitat). CDFG is looking at the possibility of developing estimates of the take and deriving mitigation acreages for the covered species so that the "fully mitigated" standard under CESA can be met. The Service will seek input from the Solicitor as to how best to provide for quantification of the take allowed by the permit. Another question that came up during this discussion is how this take that is so difficult to quantify will be monitored. Some of these species would be very difficult to detect if injured or killed making monitoring of the take very difficult. This issue has not been resolved. IID is very concerned about the possibility of exceeding the permitted take.

We continued our discussion with the topic of tamarisk scrub monitoring. We concluded that in this and the drain habitat category we would place the vegetation monitoring under compliance given that developing habitat characteristics in the created habitats is part of the commitment in the HCP. Compliance requirements relative to acquisition under this habitat type include: agency approval of the property selection, documentation of the acquisition, and documentation that the appropriate management is being implemented. Effectiveness monitoring will include general bird surveys. Relative abundance as a component of effectiveness will be dropped from the goals for all habitats/species. Baseline surveys will not be conducted in the tamarisk scrub so evaluations of the species survey results will consider the results of other studies within the local area and region. Because some of the covered species occur in the area only rarely, the HCP IT will also consider use by similar species or species with similar habitat needs in their evaluation of the effectiveness of the replacement native tree habitat in achieving the goal of the HCP. Surveys should continue throughout the permit term (albeit at a lower frequency than during establishment of created habitat). IID will have a list of actions that are excluded from consideration such as additional water for habitat beyond the original budget and a change in properties as mitigation after property has been acquired. Cowbird trapping can be considered provided it is within the management budget, but IID was not open to it as a requirement of native tree habitat creation.

The group meet on February 7, 2002. We began with a brief discussion of the phased mitigation approach for the Salton Sea. The resource agencies expressed their concern that the water requirements had not been addressed appropriately, and IID agreed that this needs to be resolved. If they exceed those figures being used, it may require that they be located where some or all of the flows out of the ponds could be reclaimed. They concurred that the new model results have raised the acreage requirements to 6,333 acres with the target fish production still at 500 pounds/acre so the acreage must be limited to wet acres only. The acreage of the ponds also need to be increased to allow for regular maintenance of some ponds. We will also need to determine if food supplementation will be required given this could have a major impact on the costs associated with this approach.

The main topic for the day was changed and unforeseen circumstances. Staff from the Service's Regional Office joined the discussion by phone. The general approach in the document is that IID has a very strong incentive to re-establish their water deliveries following the types of events discussed, and they don't believe the system would be out of operation long enough to have a significant impact on covered species. Therefore, any thing that is large enough to significantly impact covered species is unforeseen. The Service did not see this as an appropriate way to define these concepts. IID has never had a break in their deliveries lasting more than three days. They do not believe they should have to address something that has not occurred in their history. The Service encouraged them to make this a commitment in the document if they have no evidence to suggest that it will be exceeded. There are several examples in the text that state that water deliveries will be re-established, but they do not indicate that other corrective actions will be taken to address impacts to covered species (e.g., replanting vegetation in the managed marsh). IID stated that their intent was to take the action necessary to maintain the function of created habitat. This needs to be expressly stated in the document with examples of the types of actions that will be implemented in response to the events discussed. Changed circumstances need to be specifically addressed. This includes a budget component so that they agencies can determine if this aspect of the HCP can be implemented. The term "operating budget" does not make it clear that there is adequate funding to address other events beyond day to day activities.

We discussed toxic spills and the need for Emergency Response Plans that address the HCP as well as human health and safety. The habitat creation plans should include an emergency response component. The HCP biologist needs to be tied into the IID response network. The process needs to include: pre-spill planning, response activities that consider the requirements of the HCP, repair of any physical damage, and mitigation of covered species impacts based on post-spill monitoring. We also discussed fire, which could affect the created habitats. IID is looking at inserting a blanket statement that they will address impacts to the created habitats in order to return them to a functional state. A topic that needs to be added is parasites. Management funding needs to include standard measures to address bird disease, particularly botulism. IID is willing to address all of these issues in the mitigation sites, but they are not necessarily agreeing to address those throughout the habitats, in particular in the broader desert habitat. They will reconsider some of the language in the text. The intent of their approach needs to be clarified and

independent. Coordinating with the State and Federal facilities is appropriate, but reductions in management at these facilities due to budget constraints does not reduce IID's responsibilities.

We ended the meeting with a discussion of quantification of take. Given that this is a "management" HCP rather than a land development HCP, it is more difficult to quantify take. Under the CESA, a permit issue under section 2081 normally must quantify the take of individuals. If we can't develop some means to assess the take, it may be difficult to permit. IID objects to dropping species given that they feel that they are doing additional mitigation to address all of these species. They are aware with the difficulty with the list of 25, but they were working under the assumption that the others would be covered. The resource agencies will look at the impact analyses and try to evaluate if there are others that will not receive coverage.

On **February 8, 2002**, the Service and the CDFG met to discuss issues related to quantification of take. We began by reviewing individual species and determined that some categories were developing as a result. We did not get through the entire list of 71 species (we deferred on the 25 species discussed with IID previously), but we did identify approaches for the desert species taken as a result of canal maintenance activities. It appears that some additional species should be dropped on the basis of a lack of evidence for occurrence (e.g., elf owl) or a lack of anticipated take (e.g., golden eagle and ferruginous hawk). We agreed to continue our review and compare notes next week.

The group met again on **February 14, 2002**. We began with a quick review of the outstanding HCP tasks. We then proceeded to discuss comments on the drain monitoring re-write. The major issue associated with this discussion was what triggers agency approval and what does not. We determined that it would be appropriate to require agency approval for management actions that are outside what was proposed in the management plan. Any adaptive management options covered by the plan would have already gone through an agency approval and can be implemented at the discretion of the HCP IT. This led to a discussion of how the IT will function, and the group agreed that all efforts should be made for the IT to reach consensus. Veto authority will remain for the agencies. The need for long-term vegetation monitoring was also discussed. This should be planned for given that the agencies will be looking for some means to document that the success criteria are being met throughout the course of the permit. This was also true for the tamarisk scrub category. The group agreed that the general procedure outlined for the drain habitat monitoring should be carried over to the tamarisk scrub as well. For both habitats, we will need to define a water budget that includes adequate water to address all of our adaptive management options and changed circumstances. The desert monitoring is still lacking a monitoring component for the restoration/acquisition aspect in addition to the avoidance/minimization component that has already been addressed. This will be developed following the general paradigm used for the other habitats. One issue that still remains is the duration of the responsibility: perpetuity or the term of the permit. This still needs to be resolved.

When we re-convened on **February 15, 2002**, we chose to focus on the phased mitigation. We need to develop much more detailed specifications as all were concerned that the current cost

estimate of \$110 million is too low. The water agencies would like to maintain both options for the Salton Sea through to the ROD rather than identifying their preferred alternative in the Final EIR/EIS. This is problematic for the resource agencies in permitting. We acknowledged this as an issue and continued in our efforts to identify more specifically what would be required to implement the phased mitigation approach. There are essentially three phases to this approach: the hatchery only phase, a transitional phase, and the pond phase. During the hatchery phase, we estimated that over 63,000,000 fry would need to be released annually to the Salton Sea to achieve a 3,200,000 pound production of forage size fish. This requires a spawning facility that includes breeding ponds, grow out ponds, netting for the grow out ponds, and food for the fish in the grow out ponds. Some means would be needed to blend water such that the fry could be produced at or below their salinity tolerance, but that they could be brought up to the salinity of the Sea prior to release. Multiple release points may be needed to reduce predation on the fry stage. It may be more cost effective to maintain the fish in controlled conditions to a larger size ("stockers") to increase their survival. This hatchery phase would include tilapia as a forage fish and the other three sportfish present in the Salton Sea. During the transition phase, additional grow out ponds would be added to get the fish to stocker size prior to release into the ponds (if not already done), and the ponds themselves would be constructed. The sportfish hatchery would be phased out at this time. If deemed appropriate, a different species of forage fish may be used for the ponds phase of the mitigation given the temperature sensitivity and other problems that may occur with tilapia (e.g., disease). The production requirements would be the same in this phase as it was for stocking the Salton Sea. To minimize disease and contaminants issues, canal water would be used. Given the potential water requirements (the actual volume is still being determined, but may be on the order of 100,000 AFY), it may be necessary to place the ponds higher in the delivery system where the conveyance capacities are higher. Some kind of fertilization or nutrient supplementation will likely be required given that canal water is what is being discussed. We also discussed the possibility that aeration will be required.

We completed the meeting by continuing our discussion of the IT. The funding will be provided on an annual basis, but it would be reasonable to have a contingency fund set up at the beginning to address larger adaptive management changes and/or changed circumstances. The IT will be staffed by IID, the Service, and CDFG. The Implementation Biologist (IID Staff or contract) will not be a member of the IT, but that individual will report to the IT. Every effort will be made to reach consensus on issues, but there may be cases where that is not possible. In those instances, the staff of the agency which does not agree will elevate the issue within their agency. The agency can exercise veto authority through official correspondence on the issue at hand.

Staff from the Carlsbad Fish and Wildlife Office traveled to Sacramento to meet with the Solicitor to discuss the project and the HCP on February 28, 2002. Some issues of concern were identified that will need to be resolved with IID. This includes the following. We need to be able to document that on-farm and systems conservation can be implemented to address both the water transfer and the mitigation water given that the current document does not specify that fallowing be used for mitigation water. We need to have documentation that the mitigation package meets the maximum extent practicable criterion. This includes an explanation for the lack of a speed

limit in the desert habitat. We also need documentation to support that the water agencies have adequate funds to implement the HCP, including the construction and long-term management costs. The permit will not include take for plant species. The basis for the take being provided has to be well documented. We should look at best management practices for construction projects as minimization measures. It is inappropriate to cover only the vegetation removal aspects of herbicide use. We need to consider the potential toxicological consequences of those applications in our approval, therefore it would be better to drop this from the covered activities. The lack of preservation in perpetuity should be reconsidered. We need to have a time limit on the development of the management plans and a mechanism if the IT cannot reach consensus on how created/acquired habitats are managed. If coverage is going to extend to farmers' irrigation and water conservation activities, they have to be under IID's direct control. We need a mechanism for this. Coverage for lease of lands for activities (such as agriculture) that are not covered activities cannot be included in the permit. Specific indemnification for the actions of lessees should not be required. These topics will need to be scheduled for a future meeting.

The group met again on **March 1, 2002**. The meeting began with updates on IID's information workshops on the project and the briefing for the new Director of the Fish and Wildlife Service. Fallowing was the primary topic for this meeting. We began by comparing the model results for the Proposed Project, Alternative 4 (all fallowing) and Alternative 1 (baseline). Given the time differential, the mitigation requirements for fallowing would be 5,333 acres for the fallowing approach versus 6,333 acres for on-farm and systems conservation (using the maximum confidence interval). If the medians are compared rather than the maximum confidence interval differential, the ponds would need to be 2,000 acres for the fallowing vs. 3,667 acres for the Proposed Project. IID felt that this acreage differential was adequate to make fallowing a more appealing approach whereas that based on confidence intervals was not. IID will evaluate the probabilities of results off the median to justify this approach rather than the confidence interval approach. IID would also like to evaluate the use of drain water in the ponds to determine if they can offset any potential selenium problems by increasing the flow. They will look at this comparison for both the Proposed Project acreage and the acreage required for Alternative 4. Temperature may also be an issue that needs to be addressed. Fallowing is also expected to reduce the managed marsh mitigation and pupfish requirements through reduction in selenium concentrations and reduce the tamarisk scrub mitigation by eliminating the impacts associated with construction of lateral interceptors.

We need to determine if there are any mitigation shortfalls with Alternative 4 and Approach 2 (mitigation water). If mitigation water is to be used, IID wants to know how long that requirement would remain. They do not see a need to extend it beyond the point when fish are gone. The water agencies will not support continuing fallowing to facilitate restoration unless the restoration project pays for it. IID is also interested in delivering the water to the Salton Sea at larger than the volume of annual reduction but for a shorter period of time (to the extent that it can be done without flooding shoreline facilities). The issue associated with this approach is that the volume is based solely on the model and cannot respond to the continued presence of fish in

the Sea. IID will complete the necessary model runs to identify the appropriate alternative delivery sequence.

CH2MHill provided an update of the desert monitoring text and a new flow chart.

We spent the final part of the meeting discussing CDFG's efforts to quantify take. They have identified 44 species that they feel warrant take in their permit. We walked through a couple of examples of their analysis with the group. CH2MHill is going to develop a similar analysis with nine examples of the remaining species to determine if take can be identified. One of these was from the group of 25 questionable species as IID is still interested in maintaining these as covered species.

We covered several topics at our meeting on **March 7 and 8, 2002**. This included the issue of preservation of created or acquired habitat in perpetuity versus for the term of the permit. IID agreed that preservation and management in perpetuity would be appropriate for those strategies that are replacing habitat that is lost permanently. This applies to Tree Habitat 1 and 2 and Desert Habitat 5. For the managed marsh, the desert pupfish strategies, and the Salton Sea strategies, IID will commit to evaluating the status of those in year 70. If they are interested in having their permit extended, implementation of those strategies including management of created habitat will continue. A limited set of options to consider will be stated in the document. The purpose of addressing this issue is to assure that there are not impacts associated with the discontinuation of management of created habitats.

We briefly discussed recreational activities and the need to specify the scope of the projects that are being considered. If the location can be specified, this would also be helpful. CH2MHill will attempt to make the language more specific.

We discussed the problems that remain with the coverage of herbicide applications. Although the HCP does not call for coverage of take associated with the toxicity of herbicides, it does call for coverage of the use of herbicides. This necessitates the same analysis in terms of direct effects that we do not have the resources to develop at this time. Coverage for toxic effects are deemed covered by the Environmental Protection Agency through the registration process that they are now consulting with the Service on. It was decided that the activities section would discuss the fact that herbicides are used as part of maintenance, but that coverage would not be included for this activity given the problems associated with it. The Service was tasked with developing language to incorporate into the HCP.

We discussed the HCP IT process and structure was the next item on the agenda. CH2MHill had developed a flow chart to represent the decision making process. We modified the process to indicate whether a specific decision was within or beyond the scope of the HCP or applicable management plan. If within the scope, consensus among the HCP IT will allow for the action to be implemented without any further approvals. If either consensus cannot be reach among the HCP IT or the action is outside the scope of the applicable plan, IID will need to seek consensus

among the decision-making authorities within the three participating entities (IID, CDFG, and the Service).

We also discussed burrowing owl monitoring. We were cautioned by the Service's monitoring expert that the 20% annual monitoring may not give an adequate population perspective. Adequate "calibration" of the approach will be needed as part of the demographic study. We were also reminded that any manipulations (e.g., relocations and artificial nest boxes) should be approached through hypothesis testing.

We discussed the fishery and mitigation with CDFG expressing concern that aspects other than the fish-eating birds were not being addressed adequately. They see two reasons to include more than tilapia in the hatchery efforts: tilapia are impacted by colder temperatures in the winter and may not be available in adequate numbers to support the birds, and there are recreational impacts that need to be addressed. IID is open to rearing other species, but cost is an issue. IID recognizes that there are many details yet to be refined in the mitigation approach. This includes the release size of the fish going to the Sea versus fish released to the ponds, the timing of the phases, the location of the ponds, and the source of water.

The Service then provided a summary of issues raised in our meeting with the Solicitor. This includes the need for documentation that the HCP achieves the "maximum extent practicable" standard for minimization and mitigation, the document should more fully explain why mitigation does not change with the volume of water conserved and transferred, the need for documentation that adequate funding will be available to implement the proposed HCP, and the need for effectiveness monitoring to demonstrate the assumed benefits to covered species. We also discussed the approach to take that was recommended by the Solicitor that included defining an acreage area for the effect, the nature of the effect, and whether that effect was expected to result in any mortalities or just harm/harassment. This seemed to be acceptable to IID. No take is provided for plants, but they are evaluated under the internal consultation. The potential conflict between the "otherwise lawful" language under the ESA versus potential take of fully protected species was raised, but IID's attorney responded that the Service has granted take for fully protected species in other permits. Fully protected species remain a big issue for State permitting. The management plans should have a time frame for completion, and the use of conservation easements needs additional details to be provided. There were additional issues relating to third party coverage, decision-making in the HCP IT, coverage of IID as a lessor, and potential impacts to the National Wildlife Refuge.

We reviewed many small issues which came up in the Service's review of the HCP and resolved most of those, then we continued the discussion with a review of the Desert Monitoring re-write. The main gap in this write-up was a discussion of habitat restoration under effectiveness monitoring. CH2MHill agreed to develop language for this section.

The Desert Pupfish - 2 wording is still problematic from the Service's perspective relative to a recent jeopardy opinion regarding the selenium criterion. IID is not open to a stated threshold

above which they need to take corrective actions, and they were hesitant to put a specific time frame on implementation of actions under this strategy. The Service will confer internally on the implications for our jeopardy analysis and possible solutions to address the issue. We also discussed desert pupfish monitoring (excluding selenium pending the Service's discussions) and identified the obligations for compliance monitoring under each of the other pupfish strategies. We reviewed the flow chart developed for Desert Pupfish - 4 and concluded it was workable. The remaining strategies are best addressed in terms of effectiveness through general population status information. We discussed problems associated with gathering these data, and determined that the approach of having the HCP IT study the issue was best. However, the current methods will be used to survey for pupfish in the interim. We have yet to determine the schedule for these surveys.

The group met again on **March 14 and 15, 2002**. We began the meeting by discussing the analysis done of the model results linking the hydrology between the proposed project and the baseline. The differences between the outputs were nearly normally distributed, and the 95% confidence interval resulted in the same 19 year difference that we had seen in the salinity curves. Under the all fallowing alternative, however, the 95% confidence interval on the difference was 14 years. This is probably related to the reduced number of outcomes incorporated into the modeling under the fallowing alternative. When we examined the distribution of the differences, they showed a skewed distribution toward the smaller differences. This may make it appropriate to consider a 90% confidence interval in this case, reducing the difference between this alternative for the project and baseline to 12 years. This would reduce the mitigation requirement if fallowing were the sole means of conservation used.

We discussed Plan Implementation, specifically the new text provided for Sections 5.1 and 5.2. Third parties are incorporated into the planned coverage, but these parties are not signatories to the Implementing Agreement (IA). The IA will need to include a mechanism (possibly the contracts between IID and the farmers) that addresses their coverage under the permit. A more general issue is the lack of avoidance/minimization measures to be incorporated into the third party actions. We need to provide text in the document to indicate why we don't need such measures and/or why such measures cannot be implemented.

CH2MHill provided a presentation that modeled different scenarios of water use in the mitigation ponds. The water volumes being discussed by the Principals is not adequate to prevent selenium accumulation in the ponds. This is undesirable for the mitigation, and CH2MHill evaluated what increases in water flows would be necessary to minimize this impact. It was determined based on their analysis that the selenium concentration could be kept below 5 µg/L by doubling the originally proposed flow using canal water or by using New River water at six times the originally proposed flow. The risk for birds could then be deduced based on the stilt water to egg model. Given that IID is not expected to be willing to fallow additional land to increase the flow to the ponds, the use of New River water may be the only option (Alamo River water has too high a selenium concentration to be used). The graphs presented were based on the baseline concentrations, so this would have to be updated incorporating the project results. Several other

concerns were raised that would need to be addressed prior to a permitting decision being made. This included: the need to consider what water reclamation in Mexico might mean to the available volume and river selenium concentrations, the need to consider other problems that may be associated with New River (particularly disease), the need to consider the effects on fish growth and survival in the ponds given the New River water quality, and the need to consider increases in bioaccumulation associated with a sediment versus a water column pathway of exposure. There may also be outside opposition to the use of New River water for the mitigation that we should be prepared to consider.

We discussed the pupfish adaptive management program including two new flow charts provided by CH2MHill. Aspects that were added included the opportunity for outside information to be incorporated into the program, the obligation to take action relative to selenium once in all of the pupfish drains, the ability to take additional actions provided the contingency fund can support them, and firmer time frames for the studies required as part of the overall pupfish strategy. It was decided to add the study of pupfish survey methods as a measure to address the effectiveness survey needs under strategies 1 and 3. Selenium monitoring will be required in the drains at least until we reach equilibrium in these concentrations. The IT will develop a specific monitoring plan. The Service is discussing internally how previous consultations fit into this process and whether specific action will be required at the concentration identified as a jeopardy for desert pupfish previously.

We continued the meeting the next day with a discussion of agriculture, and we revisited the concept of avoidance and minimization measures. The HCP also covers removal of water conservation measures, and that aspect has not been addressed in the discussion or the species impact analyses. CH2MHill committed to developing language to fill this void. Given the nature of the ponds and the maintenance anticipated for them, there should be very limited potential for take of the proposed covered species. We also discussed the lack of a monitoring discussion for agriculture. One aspect that was not considered feasible was to monitor the effectiveness of bird strike avoidance measures. Because bird strikes are not necessarily a regular or measurable event now (although we know they occur), it is unlikely that meaningful data could ever be acquired to measure the effectiveness of measures designed to increase the visibility of new power lines. Compliance monitoring could come in the form of the regular valley-wide crop reports that IID develops and general statistics for the water conservation measures implemented. Reports will be provided as to the number and mileage of any power lines added and diversion measures installed.

The remainder of the meeting was spent participating in a conference call with the Principals, the Director of CDFG, the Manager of the Service's California-Nevada Operations Office, and the Regional Director of the Bureau of Reclamation. The topics discussed included the progress on the fully protected species legislation. There are two bills being considered: is one general bill and one bill that specifically addresses the water transfer. There is apparently still resistance to passage of both of these bills. MWD has a major issue in regards to their water intake and razorback suckers in the Colorado River. They are looking for coverage that would be specific to their intake. The Principals are also looking for assurances from the State as are provided under

the Service's No Surprises Policy. This is not provided in the CESA, and the CDFG is concerned that this might set a precedent that is undesirable. CDFG will meet internally to discuss this issue. The Principals re-iterated their desire that they be allowed to pursue funding for the mitigation from sources outside their agencies. We discussed the status of the two Federal bills, and it was suggested that no action would be taken on these before funding action was taken by the State. We briefly discussed the mitigation ponds, and the staff asked that they be given another month to pursue additional details on the feasibility of this approach. The discussion then turned to fallowing and associated mitigation requirements. MWD discussed their concept of transitional fallowing. The resource agencies would want the timing of the transition to be based on the presence of fish in the Salton Sea rather than model predictions. There are still major socioeconomic issues to overcome, and there is very little general support for fallowing. Concerns about other potential lawsuits were raised for the fallowing scenario. The Service was asked if it can permit the project with the mitigation, but many issues remain to be resolved before that question can be answered. The implications for restoration cannot be ignored. The Service is obligated to permit the approach that avoids and minimizes to the maximum extent practicable. The final issues discussed were the covered species list and potential problems associated with differences between State and Federal permitting and processing the permits in the time frame available. Conducting parallel consultations on the two approaches for 96 species will make it very difficult to complete the required documentation within their time frame. Narrowing the project and the species list will improve the quality of the analysis and make it less vulnerable to a lawsuit. After scheduling the next two meetings, that call ended.

The group met again on March 21 and 22, 2002. We began the meeting with a brief discussion of the materials the CDFG had received from the Texas Parks and Wildlife Department on raising corvina in a hatchery situation. The information seemed to indicate that this was feasible, and adequate information was provided to develop a preliminary cost estimate. This process will require that Salton Sea water be used in combination with other flows to get the appropriate salinity for spawning. The fish will also need to be acclimated to a higher salinity prior to being released. We also discussed some of the information CH2MHill had gathered about selenium in the New River. They are looking at additional runs of the model to evaluate the impact of water reclamation in Mexico. Their preliminary information suggests that the loss of organic material could increase the amount of selenium that stays in solution. This is a concern for use on the fish ponds. However, the sewage flows have higher selenium concentrations than the agricultural flows because the municipal water is all from the Colorado River whereas irrigation water is from a mix of river water and well water. They will continue their efforts to model these changes.

We also discussed the 25 species (in the HCP as "Other Covered Species"). CDFG is developing an approach in which the activities covered relative to these species would be more narrowly defined to reduce the potential impacts associated with these species. The permit would provide for coverage of the take of these species when additional information was available to evaluate the impacts of the take. Coverage for survey purposes would be defined when survey protocols are approved. CDFG will not cover invertebrates, and the Service does not provide take for plants as it is not required. However, plants do need to be analyzed in the internal section 7 consultation,

and there are plant species for which the appropriate information for analysis is lacking. The HCP would also need to identify mitigation for each of these species, although in some cases the proposed mitigation may be adequate. The Service is still evaluating whether this kind of conditional take is possible under the ESA.

We discussed the status of the desert pupfish evaluation, and the Service is still considering how to address the existing jeopardy determination for the California Toxics Rule. IID is only willing to address the changes associated with the project not problems associated with the baseline levels as they feel those are the result of agricultural activities that are not covered. The Service requested model data for the potential pupfish drains so that a drain by drain analysis could be developed for this species. CH2MHill provided new text for the pupfish section of Chapter 4 and a new table for Section 3.7.

We briefly discussed herbicide use. IID is still concerned that they have a gap in coverage for take associated with the degradation of vegetation associated with herbicide applications. Although the ability to demonstrate that any specific take is associated with degraded vegetation is limited, they are not comfortable with this gap. They will have their attorney contact the Regional Solicitor on the issue.

We briefly discussed the approaches for the Salton Sea. We discussed the limitations associated with the discussion of the ponds in the EIR/EIS and determined that much more detail will be needed in the final document. All of the concerns raised relative to the Pacific Institute's Salton Sea proposal will need to be addressed. Also, we will need to incorporate the habitat feature commitments into the design as well as other management concerns (e.g., sediment basins that are paired for continual operation through maintenance cycles). We also discussed the mitigation water concept. CH2MHill is looking at re-running the model to develop a volume of water associated with this mitigation option. The problem is the lack of confidence in the 60 part per thousand salinity threshold for the fish. If an upper bound could be placed on this figure that all parties are comfortable with, the volume of water and delivery schedule could be developed. CH2MHill biologists will attempt to increase the salinity tolerance information that they have to address this issue.

On March 21, 2002, Service staff participated in a conference call with the Bureau of Indian Affairs (BIA). Other participants included the Service's regional tribal liaison, the Bureau of Reclamation, and the Environmental Protection Agency (EPA). The purpose of the call was for the Service staff to develop a strategy for the tribal consultation process. The BIA raised several questions including the reason for the delay in initiating the consultation. This was delayed due to limited staff time and efforts to more fully develop the HCP with IID. The BIA and EPA raised several issues that they felt were of concern to the Torres-Martinez Tribe in particular. This includes exposure to winds of contaminated sediments, exposure of cultural resources, concerns that their drinking water could be impacted by the proposed CVWD percolation ponds, there is disagreement between the inflow figures given in the IID document and those provided in the restoration document released in 2000. All acknowledged that the time frame would limit what

can be done in terms of addressing the Tribe's concerns, but all agencies will make an effort to see that their concerns are raised and addressed to the extent possible.

Staff from the Service, Bureau, CH2MHill, and IID met with the Tribal Council of the Torres-Martinez Tribe on March 25, 2002. The purpose of the meeting was to provide information on the proposed water transfer and to offer assistance in their evaluation of the document. We also scheduled a future meeting at which the government to government consultation could take place. The Tribe had several concerns about the project. They questioned the delay in beginning the consultation process. The Tribe also had difficulty getting a copy of the draft EIR/EIS and HCP. They are concerned that failure of the HCP will place additional burden on them to conserve the listed species. The Tribe is also concerned about CVWD's plans for using the water and how they might be impacted. They see the two issues of conservation and use of conserved water as linked, and they expressed the opinion that the separation as currently presented was arbitrary. Given that we do not know when CVWD will release their document, it is very difficult for the Tribe to make a determination as to whether the separation between conservation and use is acceptable to them. A great deal of tribal land will be exposed based if the conventional conservation/mitigation approach is implemented. This has not been addressed adequately in the document. They are also concerned about the drains that will flow across their land and the construction that will be required to extend and connect these drains. The use of the water by CVWD is also of concern because the proposed percolation ponds are up gradient of their drinking water well, and the Colorado River is known to be contaminated with perchlorate. All of these issues will need to be addressed to their satisfaction. The Tribe looks to the Service and the Bureau to represent them in this process given the role of the Department of the Interior as their trustee and the actions required of the two agencies.

Staff from the Carlsbad Fish and Wildlife Office joined staff from the Regional Office in a meeting with the Department of the Interior Solicitor and IID's attorneys on the Implementing Agreement on March 27, 2002. Counsel for the CDFG was also present. We spent the meeting reviewing the Solicitor's edits to the draft agreement developed by IID's attorneys. Several issues came up during the course of that review. The Solicitor wanted language removed that would tie the Service to the QSA. The Service is not a party to those agreements. The issue of assurances was referenced in several areas of the document. These references are limited to what is provided for in the No Surprises Policy (50 CFR 17.22). CDFG has not yet made a determination as to what assurances they will be offering through their permit. There must be a mechanism that binds third party beneficiaries in some way. The contracts between IID and the farmers signing up for water conservation do offer a mechanism provided the appropriate language can be incorporated into them. IID's attorney will develop some draft language for the Solicitor's review. The lack of minimization measures for the farmers and mitigation for loss of farm land could make the permit/HCP vulnerable. The conflict of saying there is take related to agriculture but the mitigation is maintaining agriculture in the Imperial Valley is problematic. Additional consideration will have to be given to this approach. Leasing will not be a covered activity as there is no need for coverage. Leasing in and of itself does not result in take. There are issues related to extending the coverage to unlisted species under the Migratory Bird Treaty Act

(MBTA). The Solicitor concurred that there is an inconsistency here and volunteered to elevate the issue to a higher authority.

As part of this process IID will have to provide documentation that the HCP can be funded adequately. General cost figures are acceptable, but the Service does have to be able to document that the necessary funding will be available. This also applies to the funding that will cover adaptive management. IID will have to demonstrate why it is biologically adequate. The agreement needs to be worded in such a way that adaptive management has been planned for and does not constitute a minor modification. Monetary damages are not allowed, and all parties should agree to cover their own legal fees. The regulations used should be those in effect at the time of the action/issue. One exception is that the No Surprises Policy will be considered to remain in effect unless a court order strikes it down. IID intends to raise the issues of monetary damages and regulations in effect to a higher authority. Non-severability will apply to the agreement except by mutual consent. Severability of the permits will have to take into consideration the requirement that the activities covered by the permit be for otherwise lawful activities. Take authorization will not be given for plants.

We briefly discussed the topic of herbicide use as a covered activity. IID still sees coverage of herbicide application as necessary, but they will consider the draft language provided by the Service.

The group met again on **March 29, 2002**. We had guests from Kent Sea Tech, an aquaculture operation in the Coachella Valley, and IID also invited their aquaculturist for a discussion of the phased mitigation approach. The Kent Sea Tech staff recommended that we reconsider exclusive use of tilapia in the ponds given their temperature sensitivity. A large proportion of the fish would be expected to die off in shallow ponds during the winter months. They recommended that we consider a combination of tilapia and carp to cover the entire range of temperatures. We could reduce contaminant problems by locating the hatchery facility in the Coachella Valley and using groundwater. If the facility is going to be located in the Imperial Valley with the New River the water source, some treatment will be required to control solids and pathogens. The water requirement for the hatchery is on the order of 3,000 acre-feet/year. We could minimize selenium problems in the ponds by maintaining a high flow rate and using clean food. Based on our preliminary discussion, the capital costs for the hatchery facility are probably on the order of \$ 8-10 million with similar annual maintenance costs. The acreage for the ponds could be reduced by minimal management; they felt that the foraging ponds could support 2,000 pounds/acre without burdensome management. The ultimate density is driven more by what is appropriate for the birds. They recommend that additional species be incorporated into the ponds for a greater variety in size for foraging birds. Fish could be eradicated periodically if selenium bioaccumulation or disease become problems. The monitoring requirements associated with these facilities is not insignificant. They will develop preliminary estimates based on use of existing facilities and groundwater versus new facilities and river water.

For stocking tilapia directly to the Salton Sea, the Kent Sea Tech staff felt that only temperature acclimation would be required. They felt that the tilapia could tolerate the salinity change. Corvina stocking offers a whole different set of concerns as this has never been done commercially. They are willing to develop preliminary estimates for stocking corvina, but the range of costs may be fairly wide. The target is for 150,000 five pound fish per year. They will estimate the number of stocked fish required to meet this goal. They asked the resource agencies to develop target delivery schedules for the tilapia (and carp for the pond phase) to best meet the needs of the target fish-eating birds species. This includes the size and pounds required on a monthly basis. **This information will be provided by April 2, 2002.**

A conference call was held that included the Principals from the four water agencies, the Director of CDFG, the Regional Director from the Bureau of Reclamation, staff from those agencies and staff from the Carlsbad Fish and Wildlife Office. The water agencies were anxious to have feedback from CDFG on the language they have proposed for legislation on the fully protected species issue. CDFG has received the language but has not had the opportunity to deliberate on it. They hope to meet and discuss it next Monday. The water agencies are looking for support from CDFG and DWR in getting legislation through. Fallowing and mitigation is an issue of great interest. The technical staff hope to address this during the Thursday/Friday meeting. The Coachella Canal Record of Decision has been signed. MWD and CVWD are anxious to get a concurrence letter from CDFG. The discussion included the upcoming meetings among the water agencies and opportunities to educate entities outside California on progress to date. The SWRCB petition process is also a key part in this process. They are hoping that legislation can come in time to be considered in the hearings. The water agencies were concerned about the CDFG comment letter on the QSA Programmatic EIR, and they have asked that CDFG coordinate their comments with them on the draft EIR/EIS for this project. As the final topic an agenda was developed for the meeting/call on April 9th.

Three public hearings were held to receive testimony on the EIR/EIS on **April 2, 3 and 4, 2002.** The hearings were held in La Quinta, El Centro, and San Diego. A verbatim transcript of the comments can be found in the administrative record.

The group met again on **April 4 and 5, 2002.** We began with a brief discussion of the CDFG comment letter on the QSA Programmatic EIR. CH2MHill provided some preliminary cost figures from Kent Sea Tech on the fish production. Hatchery start up would cost on the order of \$4-5 million. Annual production would be approximate \$2/lb. of fish or \$6.4 million/year. CH2MHill suggested that the agencies consider stocking the fish to the river deltas rather than constructed ponds. Barry Costa-Pierce suggested that there may be as much as 500 acres around the river mouths that is of lower salinity that could support fish longer. The Service has several concerns about this approach: there would be no way to manage for avian botulism in this situation, there is no way to assure fish availability in such an uncontrolled situation (the fish could go up river or into deeper water), we don't have accurate measurements of the size of this "estuarine" area, we don't know how it will change with salinity, and we don't know how stable it is under windy conditions. The Service asked that the constructed ponds be considered a primary

approach with consideration of this if the appropriate supporting information can be provided at some future date.

We moved into a more detailed discussion of the ponds. IID believes that 500 acres is feasible given the space that will be available around the New River as the Salton Sea recedes. The ponds would be flow-through systems with a gravity-fed supply, but they would have to be pumped when complete drying is needed. They were planning for each pond to be approximately 40 acres using cut and fill construction. A justification for 500 acres (as opposed to the 5,000 acres in the draft document) will need to be developed for the final version of the document. We need to confer with the Kent Sea Tech staff to confirm that it would be reasonable to stock 630,000 2-5" fish in 500 acres of ponds within a month's time. This is the proportion that was assigned to February based on the bird distribution. One issue that came up in terms of timing of construction was that it is likely that we would need to replace the island nesting habitat before we would need to stock fish in the ponds. IID was open to construction and filling of the ponds with islands to occur early to meet that need with fish stocking to occur later. We need to determine how much nesting space is required and how much island space to assign to each of the ponds. CH2MHill will re-write the appropriate sections of Chapter 3 and 4 to reflect the fact that IID is now committing to 3.2 million pounds of fish annually to be stocked to 500 acres of ponds. The delivery schedule will be finalized by the HCP IT.

For Approach 2 (mitigation water) IID is looking for an upper limit on this requirement rather than taking the approach that water would be added until the fish are gone. We need to determine an appropriate threshold. In order to provide adequate justification for the threshold, it will require looking at some of the literature on salinity tolerance in tilapia. The agencies requested that CH2MHill provide copies of four references that they had identified that looked at salinity tolerance in the range of interest (60 - 80 g/L). A threshold of 60 g/L did not appear to be appropriate given that one of the citations indicated that reproduction was seen at 69 g/L. Aquaculture production values seemed of limited usefulness given that they would all likely be at much lower salinities.

We briefly discussed the re-write on the desert pupfish monitoring section. The Service is still evaluating the selenium strategy, and additional monitoring requirements may stem from any changes in that strategy. We also discussed the other covered species. CH2MHill is developing the take table per the guidance received from CDFG, but the Service is still lacking adequate information to address these species to meet the permit issuance criteria. This can be re-evaluated when CH2MHill provides the table requested by CDFG. The write-up for changed and unforeseen circumstances should be available next week. CH2MHill is incorporating information on IID procedures for responding to emergencies such as hazardous materials spills. We discussed the phased mitigation approach under a fallowing for conservation and transfer scenario. If the same approach is used, the 14 year difference requires 2.3 million pounds of fish per year. If we consider that the probability distribution for the fallowing alternative was skewed towards the low end of the distribution, a 90% confidence interval looks acceptable. This would reduce the requirement to 2 million pounds of fish per year (a 12 year difference). We discussed

the corvina hatchery . Although this is not a specific requirement in the HCP, CDFG is still looking for cost figures to address this approach to mitigation for recreational impacts. The hatchery operation for this species will need to be ready earlier than that for the tilapia.

We also discussed Salton Sea monitoring by working through the text in the HCP. IID needs to be prepared to cover the costs of fish monitoring if CDFG cannot follow through on this commitment. A related concept that will need to be addressed in the IA is the level of commitment from the resource agencies and what it will mean to the implementation of the HCP if one or both of the agencies is/are not able to perform some or all of the required tasks. This needs to be reflected in the Roles and Responsibilities language the agencies are providing for Section 5.1.2. We determined that bird surveys of the ponds should be conducted in summer in addition to spring, fall and winter (IID was not present to concur). Adaptive management measures are no longer focused on in-pond production but should include: changing the species of fish being used (one with similar culturing requirements, however), changing stocking procedures, and adjusting the size of the fish. Disease will be addressed under changed circumstances. In terms of coordinating with a restoration project, the language was modified to reflect that stocking would continue until restoration re-establishes natural fish production in the Sea. IID was not present to concur, but this would not be an increase over what is required if there is not restoration as stocking will continue to the Sea or the ponds for the permit term.

Approach 2 offers different challenges to monitoring. We concluded that flow measurements would be the most direct measure of compliance. These measurements would be compared to the projections for baseline inflows. A component of effectiveness is tracking the salinity changes that result from the supplemented inflows, and fish presence would also be appropriate to monitor. However, given that the salinity projections and estimates of fish salinity threshold are estimates, there are no requirements of IID in terms of adaptive management should the actual salinity and fish occupation changes not match our expectations. Provided compliance with this avoidance measure can be documented, no addition monitoring is expected to be required. The agencies will confirm this assumption.

Our final topic was shoreline strand monitoring. The Service recommended that the HCP IT be given flexibility not only in terms of the frequency, but they be allowed to extend the monitoring if they deemed it appropriate. IID was not present and so could not concur with this change. We also modified the language to allow for more advanced technologies that could replace the use of aerial photography. All agreed that such advances were likely in the next 75 years.

The HCP group met again on April 10 and 11, 2002. We began with a discussion that include the State and Federal Refuge managers on the topic of managing the IID managed marsh mitigation. The Sonny Bono Salton Sea National Wildlife Refuge has concerns about both their water priority and the fact that they are on month-to-month leases. While IID instructed them that this situation was negotiable, the management of the mitigation is considered a separate issue. IID would guarantee water for the marsh and provide funding for management. All of the infrastructure would be constructed by IID. Both agencies were open to the concept, but many

details would need to be resolved prior to such a contract being developed. The location of the proposed mitigation would factor into which agency would be the logical choice for management.

The discussion then moved on to Approach 1 for the Salton Sea. We have three proposals that have been discussed: 1) 5,000 acres of ponds with in-pond fish production/hatchery supplementation using canal water and built on agricultural land, 2) 5,000 acres of ponds with in-pond fish production supplemented by hatchery fish using New River water and built on exposed seabed/New River basin land, and 3) 500 acres of ponds to be stocked with hatchery produced fish using New River water and built on exposed seabed/New River basin land. The concerns that have been raised regarding the last proposal include: increased transmission of avian disease, interference among birds during foraging, control of water quality such that toxic materials are preventing from entering ponds, responding to fish kills (clean up and re-stocking), bioaccumulation of selenium and DDE, and increased exposure of fish to pathogens that could enhance the risk of avian botulism. Future documents should address these issues. The costs have only been developed for proposal 1, but the \$110 million estimate did not include an adjustment for inflation, the discount rate may be too high given the current economic climate, and inadequate water was included in the proposal. We estimated that at least double the proposed water volume would be needed. Preliminary estimates of costs on proposal 3 are approximately \$75 million, but this has also not been adjusted for inflation. Water is essentially free in this proposal.

The discussion then moved on to Approach 2 for the Salton Sea and how this would be implemented. The primary concern is the length of time mitigation water would have to be added. The general concept that was developed is that water would be delivered to the Salton Sea until fish-eating bird numbers had declined to a yet to be determined level or the year 2030, whichever was first. The year 2030 represents the 95% confidence interval on the baseline reaching 60 g/L salinity (this is the same cutoff used in developing the mitigation in Approach 1). The most direct approach to this as mitigation would be to add annually what did not go to the Salton Sea the prior year as a result of water conservation. The volume would be adjusted for the lower salinity of Colorado River water versus the drain water that is lost. IID would like the resource agencies to consider a schedule that provides for earlier delivery of water to the Salton Sea (i.e, not annually based on the prior year's conservation), but the volume of water delivered would be equivalent to what is needed to keep the salinity of the Sea below 60 g/L until 2030. Service staff responded that the slope of the salinity curve is important along with the endpoint. Fish are likely to be more stressed and less healthy the closer they get to the maximum level of their salinity tolerance so that period of maximum salinity should be no longer than it would be with the baseline projection. IID intends to run the Salton Sea model to determine the optimal delivery schedule that still meets the requirements. **The costs associated with this approach will be based on the volume of water required at the water transfer price of \$250/acre-foot of water.** One issue related to the permit is that this requirement differs depending on whether water goes to CVWD or not. A mechanism will have to be developed that addresses the salinity changes associated with variable use of the water by CVWD.

The Bureau of Reclamation was represented at the meeting and suggested that we reconsider our baseline. It was their staff's contention that if the voluntary efforts fail, IID's reasonable and beneficial use will be reconsidered and their water deliveries reduced. Impacts to the Salton Sea without the project are therefore underestimated. IID countered that the baseline in the document is the Bureau's baseline as well given they are the Federal lead on the project. IID also expressed the opinion that the Bureau cannot reduce IID's deliveries (as an enforcement action) without regard to the requirements of the ESA. CDFG also expressed concerns about such criticisms at this late date.

For the remainder of the meeting we discussed some outstanding issues. The Service was asked if there had been any change on their position relative to the other covered species. Staff relayed that no significant discussions had occurred on that topic. IID was urged to consider that the legal liability associated with coverage in the permit given the state of knowledge may be a greater risk than that associated with not having those species covered in the permit at this time. The Service is still waiting to see language as to why a lower speed limit is not practicable in the desert. The issue of coverage of conversion of lands leased to the Refuge to some other activity came up. Service staff expressed the concern that the current documents do not address the biological impacts of this action nor is it mitigated in the HCP. IID decided that this would be excluded from coverage and would be addressed separately if necessary. We discussed the fact that there is take of desert species that is minimized but not mitigated. CDFG suggested that this could be addressed by surveys to determine the number of individuals likely to be impacted with preservation of adequate acreage to offset this loss. This sounds reasonable in concept, but it may offer challenges in the Federal process. The Service is still evaluating the language in Desert Pupfish Strategy - 2 and hopes to have a determination soon. We discussed the possibility that the cap in water use or the Inadvertent Overrun Policy could result in cuts of water deliveries to the refuges. This is addressed in the document by assuming that the payback would occur through fallowing of agricultural lands. No impacts are expected to the refuges provided they do not exceed their standard water orders. If they take more than their order, they would be required to reduce use the following year to make up for that over-usage.

Species that are impacted by agriculture need to have mitigation of those impacts to the maximum extent practicable (or fully mitigated per CESA). This occurs in some cases through benefits accrued from other mitigation strategies but not in all cases. Some are only discussed in agriculture (mountain plover, ferruginous hawk, and long-billed curlew), and others have mitigation in the Tamarisk scrub strategy only if it is placed near agriculture (Swainson's hawk, white-tailed kite, and loggerhead shrike). This may be undesirable given the cowbird population in the area. The group agreed to consider what mitigation might be feasible for these species. New language for changed and unforeseen circumstances should be available next week. We have a CEQA issue with the fact that the CVWD Water Management Program EIR is not going to be available for review during this project's comment period, and this project's EIR/EIS refers to it. We briefly discussed mitigation for Alternative 4, and concluded it would essentially be the same as for the proposed project scaled to a lower fish requirement (2 million pounds annually

once adjusted for the lower impacted and the skewed distribution of model outputs). We concluded the meeting with a discussion of the process and schedule.

Staff from the Service, the Bureau, and CH2MHill met with the Torres-Martinez Tribe on April 12, 2002. The staff from the Bureau of Indian Affairs, the Environmental Protection Agency, and CVWD were also present. We began with a discussion of the various documents involved in the water transfer and QSA. The Tribe was concerned about the way parts of the project were segmented into different documents and the fact that CVWD's document would not be available during the comment period on the water transfer EIR/EIS. This is problematic, and the lead agencies will need to find a way to address this gap as the process proceeds. The Tribe will have to consider what they have before them in making their comments. If additional information is received in the final EIR/EIS, they would like the opportunity to provide comments and have them entered into the project record. We proceeded to discuss their comments on the QSA Programmatic EIR and the Bureau's Programmatic EIS on the Implementing Agreement/Inadvertent Overrun Policy. Many of these comments focused on CVWD and their use of the additional water. This discussion centered around issues of water quality in the Colorado River versus the groundwater. Perchlorate is of great concern because it is present in the Colorado River at levels of concern but not in the groundwater. This issue only recently came to CVWD's attention because the action level recently dropped, and it is now below the current river concentrations. CVWD has this concern in the upper basin as well because recharge is also occurring there. CVWD will be making every effort to encourage use of Colorado River water for irrigation thus reducing the recharge that will be necessary. They asked the Tribe to consider the other impacts that may be associated with not re-charging (e.g., increased pumping costs and intrusion of high salinity perched aquifer water). However, the proposed location of the recharge basin focuses exposure on the Tribe. The Tribe also raised issues in the letters about listed species and/or critical habitat at the Salton Sea that were not adequately addressed. There currently is no designated critical habitat at the Salton Sea itself. The Tribe is concerned that with this project any future critical habitat may have to be designated on their land. The Tribe also looks upon the fish in the Sea as a trust asset that is not adequately addressed by Approach 1. The Tribe sees recovery of the Sea as the only viable approach to addressing the ecosystem problems. CH2MHill provided an update on the area in the document they hoped to strengthen, and the technical session of the meeting ended.

In the **government-to-government consultation** the group had an open discussion of the project direction. The Tribe sees a dual responsibility for the Department in providing for the water transfer and restoring the Salton Sea. They are limited to groundwater as a sole source of their water, and they do not want to see the use proposed by CVWD impact this resource. The Bureau will continue to work with CVWD to identify a way to address the Tribe's concerns. The Service provided some background as to how Approach 1 was developed, but the advantages of Approach 2 are obvious from many standpoints. We will need all parties to accept the use of this water for the Sea as a reasonable and beneficial use if we are to be able to proceed with this approach. This includes the Department of the Interior. The Service and the Bureau will work

with the Solicitor's Office to identify a mechanism whereby comments to new information in the final EIR/EIS can become part of the public record. With that, the consultation closed.

Staff from the Service and the Regional Solicitor's Office met with legal counsel for IID on the Implementing Agreement on **April 16, 2002**. CDFG legal counsel participated by phone. The group went through the latest re-write of the document. The necessity of Certificates of Inclusion for the participating farmers was reiterated. IID's counsel will develop a sample contract that will be the functional equivalent of a Certificate of Inclusion for the Solicitor's review. The Service has not seen any language regarding the disposition of created habitats at the end of the permit. The closure of these habitats will have impacts that have not been addressed, and IID was to develop a list of options for those habitats to be incorporated into the HCP. The Solicitor stressed that this will be needed. The Implementing Agreement will also need to identify the mechanism of land preservation, and it must be acceptable to the Service. If the HCP is going to cover monitoring activities, the qualifications required for individuals carrying out those activities needs to be delineated in the HCP. Permit coverage for IID as lessor for land used for other than covered activities will not be provided. Documentation that the mitigation minimizes and mitigates the impact of the take to the maximum extent practicable is needed for all conservation strategies outlined in the HCP. The topic of assurances was discussed and resulted in debates on several fronts. These issues were deferred in order to continue progress on other areas of the document. Documentation of funding is still pending; it is supposed to be part of the application package. There also needs to be documentation that IID has the authority to carry out the actions described in the HCP. The attorneys will exchange another round of re-writes and schedule another meeting as appropriate.

On **April 17, 2002**, the HCP team took a tour of the upper reaches of the All-American Canal. This allowed the group to evaluate the effectiveness of the proposed desert measures. The team determined that vehicle speeds are likely to remain low due to the road condition in several areas. Much of the canal road in the upper reaches is set on a terrace of sorts between the surrounding habitat and the canal itself and does not appear to be particularly attractive for wildlife use. One covered species was observed during the tour (brown-crested flycatcher, *Myiarchus tyrannulus*).

The HCP team met again on **April 18 and 19, 2002**. In this meeting we attempted to wrap up as many of our outstanding items as possible. We have decided on a volume of water for mitigation by choosing the upper bounds of 60 ppt salinity being reached in the year 2030. This water can be delivered on a variety of schedules, but the volume obligation is set. All agreed that the water could stop sooner if the fish were gone before 2030. IID will also evaluate the additional volumes required if half or all of the water is used for soil leaching. IID responded to the concerns about water rights as a potential changed circumstance by stating they have command and control of the water, and it would not be subject to others' water rights claims. Relative to eminent domain, IID would re-establish the required habitat elsewhere if required as a result of eminent domain. We established time frames for this as part of our discussion. There is still resistance among the Service and CDFG to the 500 acre pond concept. Additional information was sought from the Bear River Migratory Bird Refuge on the density of white pelicans on their ponds. They have not

had any significant disease events among pelicans, but other birds have suffered from avian botulism, Newcastle disease and avian cholera. The staff there has observed pelicans and cormorants foraging in the same areas. We had an in depth discussion of the pros and cons of different pond concepts including a review of potential costs. No conclusion was reached regarding this issue.

Herbicide use will be dropped as a covered activity. Regarding pupfish drains and selenium, IID will maintain the current conservation strategy knowing that refinements may be needed prior to permitting. The desert strategy may be modified to delay flood related repairs to give spadefoot toads time to metamorphose into adults (if not precluded by health, safety and property damage concerns). Land use has been clarified in the HCP by adding a table of the specific covered land uses. In regards to the other 25 species, IID will incorporate these into the document per the direction from CDFG. The Service will have to address them as they deem appropriate. On fallowed lands, IID will have farmers implement some erosion control measures. IID is willing to commit that on their lands this will be a cover crop or ridge-tilling to try and enhance foraging opportunities for covered species. This will not address mountain plovers, but the need for mitigation may be so small as to not be practically mitigated at all. Nesting islands will be created to address gull-billed terns and black skimmers specifically. IID will consider addressing double crested cormorants by breaching the road to Mullet Island in hopes of maintaining its inaccessibility to terrestrial predators longer. The IT will evaluate whether additional measures will be required. In regards to Salton Sea monitoring, no effectiveness monitoring will be required with Approach 2. Only compliance with the required delivery of mitigation water will be needed. Approach 1 will be similar to what is in the text now and what has been developed under other strategies. Things that could be adaptively managed under the HCP include the species of fish used, the delivery methods and schedule, and possibly the acreage of ponds provided it does not exceed the maximum.

The HCP team met again on **May 6 and 7, 2002**. The resource agencies informed IID that the 500 acre pond proposal was not adequate. We are back to something on the scale of the original 5,000 acre proposal. We discussed dropping the stocking of tilapia into the Salton Sea with the ponds to become operation earlier instead. This was the preferred approach for CDFG. The pond development could be phased to allow for adaptive management of pond construction and operation. We are looking at the need for aeration, supplemental feeding, use of canal water, and hatchery supplementation as in-pond production is not likely to be adequate. In regards to Approach 2, IID insisted on a clause that would allow them to cease mitigation water deliveries if the fish were no longer present in the Salton Sea. They did not want to be obligated to make mitigation water deliveries after the fish are gone. The HCP needs to identify a method for monitoring this aspect. In our discussions of Approach 1, we focused on bird density in the ponds. Based on figures received from Bear River Refuge and the average numbers of birds, 5,000 acres would be an appropriate size. This does not account for amortization of size as we have done with the fish requirements. Concerns were raised that fish density would be too low to be attractive to the pelicans. We have no independent data on fish density that is attractive to

pelicans. There is a great lack of confidence that this proposal can mitigate successfully the impacts to fish-eating birds at the Salton Sea.

In our **conference call with the Principals on May 7, 2002**, we relayed the great uncertainty associated with the ponds. Given the unknowns, it is difficult to say if this approach will meet the permit issuance criteria. The added costs of canal water, aeration and the other requirements have not been considered adequately. The total for this approach is now over \$300 million. Given that there is still a rather large mitigation requirement with fallowing for the project (direct fallowing), it makes more sense to narrow the field of projects/mitigation to efficiency conservation with the hatchery/ponds and direct fallowing with mitigation fallowing. Use of Colorado River water for mitigation water should be acceptable provided it is part of the 4.4 million acre-foot apportionment for California. MWD raised concerns that other states might object to this during the period when the Interim Surplus Guidelines are in effect. Further direction is needed on this issue. CDFG agreed to work with the Service on making a decision as to whether Approach 1 could be permitted. The Service reminded the water agencies that in our determination we will consider if Approach 1 would minimize and mitigate the impacts to the maximum extent practicable and whether documented funding sources are available for this part of the HCP. Both agencies were comfortable with permitting Approach 2. Another meeting was scheduled, and the call ended.

On **May 8 and 9, 2002**, Service staff participated in a meeting to organize the response to comments effort. Master responses had been prepared for several subject areas, and some specific comments have been developed. Copies of these were provided to the Service. Given the uncertainty associated with the HCP approaches for the Salton Sea, no major revisions will be done pending the outcome of the Service/CDFG discussions. Responses will not be developed on Approach 1 until further guidance has been received. The approach will be updated based on the most recent discussions, but nothing will be finalized. Beneficial use of the water is still an issue under both approaches given they both call for use of canal water. This will need to be addressed. Approach 2 in its most recent form is problematic because the draft EIR/EIS considers the mitigation water for the term of the project as mitigation for other significant impacts (particularly air quality impacts). This issue will be re-evaluated by IID. If mitigation water is provided throughout the project, it will be done on an acre-foot to acre-foot basis. Salinity may reach the 60 ppt threshold in 2023 as predicted by the model rather than forcing it out to 2030 as in the current approach. The Service stated that this was done because IID wanted to stop providing mitigation water. A 1:1 match for 75 years is acceptable as an avoidance measure. Deferral of issues to the Implementation Team is being considered and legal precedent is being sought to respond to comments on this issue. Selenium in the drains was discussed, and the conclusion is that there is no feasible mitigation for these increases. Pupfish drains will be addressed per the HCP. Under Approach 2, mitigation water could be used to dilute the selenium concentrations in the pupfish drains. The baseline was a source of many comments and much discussion in the group. The group achieved a reasonable understanding of the assumptions, but the responses given need to be very thorough and clearly stated so that others can understand these concepts.

Other topic areas discussed include: growth-inducing impacts (master response pending), cumulative impacts (most comments focused on Mexicali), general project description issues, and Indian Trust Assets (which is being re-written). The Service's margin notes were also discussed as they were mentioned in the Service's comment letter. CH2MHill committed to reviewing the letter responses to assure that significant issues were addressed and responding to minor issues/questions in the errata. There was disagreement as to how CVWD's receipt of water would affect the volume of mitigation required under Approach 2. Additional model runs will be conducted and the outcome provided to the Service for discussions with that agency. The problems with air quality dominated the discussion on the second day suggesting that mitigation water for the term of the project might be the preferred approach. A decision is pending. Dust generated from construction and fallowed land can be addressed more easily through best management practices and are not considered a problem to address in the responses. The discussion briefly touched on the Salton Sea restoration, and IID is of the opinion that there are no impacts to that project given no project has been approved. The document does state that the scale will be different with and without the transfer. Following another brief discussion on socioeconomic issues, the meeting adjourned.

A conference call was held between the Service, the Bureau of Reclamation, the Bureau of Indian Affairs, and the Torres-Martinez tribe on **May 20, 2002**. The Bureau of Reclamation provided an update on the document schedule and how that can provide for additional time for government-to-government consultation if needed. Comments received on the Final EIS can be responded to in the Record of Decision (ROD) and will become part of the administrative record. The draft Programmatic EIR for the CVWD Water Management Plan is expected to be released in June. We discussed the decision-making process for the Salton Sea approach; CDFG is expected to provide specific input on this issue at a meeting on **May 21st**. The Torres-Martinez still have concerns about groundwater and air quality. They have not received adequate documentation of the groundwater model from CVWD to date. The Bureau of Reclamation will encourage CVWD to forward more information on to the tribe. Perchlorate is of concern and will be problematic because it has not been modeled. The Service agreed to forward information on the Salton Sea approach as it develops and to schedule other calls as needed.

The HCP team met on **May 20 and 21, 2002**, to discuss the screen-check version of the HCP and attempt to finalize the draft on all issues except the Salton Sea. We discussed the need for better documentation for the conservation strategies having met the "maximum extent practicable" aspect of the issuance criteria. IID objected given that this standard (by their interpretation) should only come into play if the adequacy of the conservation strategies is questionable. It is IID's opinion that they have proposed conservation measures that are more than adequate to offset impacts, and thus there is no need to demonstrate that the measures represent the "maximum extent practicable." The Service raised that possibility that additional avoidance/minimization measures may be required for maintenance of the existing All American Canal as an emergency conveyance; additional input from other desert staff is being sought. Per recent discussions on the Implementing Agreement, there will be no take coverage for IID as a lessor of lands used for activities other than covered activities. The Service will also not be

covering the application of herbicides. The Purpose and Need section of the HCP also needs to specify that a permit is needed to avoid a violation of section 9 of the Endangered Species Act. This language will be added. The measure to extend the useful life of Mullet Island (breaching the road bed while still flooded on either side) needs to be added to the Salton Sea strategy if Approach 1 is taken. Approach 1 should also clarify the aspect of addressing fewer birds for a longer span of time. With Approach 2, the avoidance does raise an issue in regards to permit coverage. IID is hopeful that both agencies can provide for permit coverage for avoidance just as they would if there would be quantifiable take. It should be feasible to provide coverage through acknowledgment of their avoidance of the impacts.

Some minor modifications were made to the species-habitat associations and some of the conservation strategies. The group reviewed the new measures for the "Other Covered Species" and recommended several clarifications, particularly relative to the bats. The Service has not yet made a determination as to coverage for these species. Several specific issues were identified that require input from the Service's Regional Office. The figures used for the commitments of water require thorough justification given the restrictions set forth in the No Surprises Policy. We discussed the possible scenarios under Approach 2 (mitigation water to maintain the Sea below 60 ppt through 2030 or mitigation water to match reductions throughout the permit term). One requirement drops with the use of Approach 2 either way (nesting islands), whereas the pupfish connectivity and shoreline strand/adjacent wetlands strategies would still be required under the 60/2030 scenario. Mitigation for the term of the permit would address all of these requirements, and this would also address other impacts including air quality. IID will need to make a determination as to which scenario best meets their needs.

On May 21, 2002, there was another Principals' Meeting at the CDFG Director's office. During that meeting CDFG informed the water agencies that the pond concepts developed to date would not meet their permit requirements biologically. We discussed the need for coverage of species for which impacts are avoided if the fallowing/mitigation water approach is utilized. This is very important to IID. There are still issues to be addressed relative to fully protected species and the Colorado River. IID is working with several environmental groups on these issues. These same groups would also like to see mitigation water for the life of the project. That would meet the mitigation requirements for the HCP. Additional discussions are expected with these groups.

A meeting of the EIR/EIS team occurred on May 22, 2002. At that point, IID had made the determination that only Approach 2 would be pursued for the Salton Sea. The focus of the discussion was which scenario would be implemented given that the current document calls for mitigation water for the life of the permit. IID would prefer a scenario that allowed them to stop the mitigation water if it is not required to address air quality impacts (after the HCP requirements have been met). The Service suggested that the 60/2030 scenario could be implemented, and the additional water to achieve that (over just matching the reductions) could be banked for the future. If mitigation water is required, the banked portion could be deducted from future requirements. This is very difficult to implement if IID does not want to commit to using only fallowing for water conservation. Maintaining flexibility in the conservation method would be

facilitated by a scenario that would only match reductions. This would require that mitigation water be provided for a longer period of time (to 2042 to match the model predictions for the No Project to reach 70 g/l salinity), and IID is evaluating the benefits/costs of maintaining the additional flexibility. IID is also concerned about elevation of the Salton Sea. To maintain the structural integrity of the dikes along the south end of the Sea, they would like the elevation to go down to at least -235'. This is what is predicted for the Baseline/No Project, but the 60/2030 scenario might slow the elevation reductions down. This will also need to be considered, and IID is developing language that would preclude any requirements in the HCP that could result in flooding of private properties. If this limits the ability to achieve the 60/2030 goal, a discussion will be needed that the proposal is the maximum extent practicable and why.

Several NEPA issues came up including the use of an abbreviated Final EIS approach. Given the magnitude of comments and the potential for changes, it is not the preferred approach. However, no other approach is deemed feasible given the schedule. Hearing comments and written comments are all being responded to, but individual comments will be referred to Master Responses as appropriate. Approach 1 will not be removed from the document, but the Errata will clarify that this approach is no longer being considered. The Service recommended a more comprehensive Master Response on the Baseline issue given the number of comments associated with this topic. An actual calculation of the baseline inflow figures would be helpful. Responses to all comments should be available for review in the first week of June.

The meeting continued on **May 23, 2002**, but Service staff were not available to attend.

On **May 29, 2002**, staff from CH2MHill contacted the Service to discuss the shoreline strand/adjacent wetlands portion of the Salton Sea strategy. Given the use of Approach 2, the concern was raised that we may need to reconsider the Baseline for this habitat type. If the impacts are avoided until 2030, it may be more appropriate to establish the Baseline at that time. However, given the need for an established commitment from IID, this approach is problematic. CH2MHill wanted to develop language that would not obligate IID to mitigate for impacts resulting from the actions of others. They committed to developing such language that would result in the monitoring beginning in 2030, but the cap will remain the acreage base on the information in the University of Redlands database as the best available information at this time. They also intend to include language that will call for re-evaluation of the appropriateness of the strategy at that point in time. This language has not been received from CH2MHill/IID.

Preliminary responses to the issues raised at the previous HCP meeting were forwarded by Service staff to IID and CH2MHill on **June 3, 2002**. Service staff recommended that IID consider these responses (although perhaps not yet complete) in continuing their refinement of the HCP. IID requested that the Service provide very specific guidance as to what is needed to finalize their HCP/permit application package as they do not have the resources to continue the negotiation process.

Service staff provided some assistance in finalizing the responses to comments, but time constraints limited our ability to participate in the process. Service staff provided comments informally on the Master Responses on **June 3, 2002**. Access to specific comments was available through the CH2MHill website, however, only a portion of the responses was accessible to the Service staff. Service staff provided informal comments on the Biological Resources topic responses that could be accessed on **June 6, 2002**. Informal comments were provided on the Hydrological Resources topic responses that were accessible on **June 7, 2002**. On **June 12, 2002**, the Service's Carlsbad and Regional Offices received copies of the completed responses to comments (on CD-ROM) for review. This included Master Responses and responses to the individual letters and testimony received. The Service was given until 4:00 pm on **June 14, 2002**, to provide the Bureau of Reclamation with comments on the responses. Due to the limited time for review, only a portion of the Master Responses and one letter were reviewed. Informal comments on these topics were provided to the Bureau by the deadline.

On **June 11, 2002**, a meeting took place between the Service, the CDFG and the Arizona Game and Fish Department to discuss issues related to impacts on the lower Colorado River from the proposed water transfer and related activities. Carlsbad Fish and Wildlife staff participated by phone to provide background information and to stay informed as to issues related to the transfer. The primary concern raised was that the biological conservation measures, while appropriate to offset impacts to federally listed species, are not adequate to mitigate all of the impacts on the lower Colorado River from the project. Arizona Fish and Wildlife Service staff acknowledged that the Fish and Wildlife Coordination Act (FWCA) process was not complete for the project and that it would be appropriate to address remaining Federal and State concerns as part of that process. Arizona Service staff planned to contact the Bureau of Reclamation in order to continue the FWCA process so that outstanding non-ESA issues could be addressed.

Staff from the Bureau of Reclamation and CH2MHill developed new versions of the Environmental Justice and Indian Trust Assets sections. Unfortunately, these were not provided to the Service for review until **June 14, 2002**. Comments were provided to the Bureau on these sections on **June 17, 2002** (the next business day). However, the responses to comments and the Errata sheets (including this new text) had already been mailed to the agencies that submitted comments. The lead agencies were concerned that it would be inappropriate to make changes to the text of these sections between distributing the responses to the agencies and IID's certification of the document as a Final EIR. This determination as to whether additional changes will be incorporated into the document will be made by IID counsel.

The Service and CDFG conferred via teleconference on **June 21, 2002**, to discuss the problems associated with the "pond approach" to mitigating IID's impacts on Salton Sea fish-eating birds. Several issues were identified including potential disease problems, concerns regarding consistent water availability, potential behavioral problems and associated legal liability associated with encouraging bird foraging in a pond setting, and the lack of an appropriate contingency plan should the ponds fail to mitigate the impacts. Uncertainties were also identified associated with the stocking of fish directly to the Salton Sea as it is not clear that fish could be stocked

successfully for the entire interim impact period identified by the model. There have not been adequate studies to identify the salinity thresholds for reproduction versus survival and growth to evaluate this for the tilapia currently inhabiting the Salton Sea. With this approach the full impact would be mitigated over the interim impact period, rather than spreading the mitigation over the entire term of the permit. This would result in a very large fish stocking obligation on an annual basis.

On **June 27, 2002**, the Service, CDFG and the water agencies met to discuss narrowing the scope of the HCP. Carlsbad staff were only able to participate in part of the meeting via telephone. The focus of the discussion was the possibility of dropping the white pelican from the covered species list. This would facilitate the process now, but it could be problematic if the species is listed in the future. Concerns were raised over the likelihood of incorporating fallowing into the project and the limitations on the use of Colorado River water for environmental purposes. The discussion included the limitations that potentially could be imposed by the Endangered Species Act as a result of a potential future listing.

The Service and CDFG had a follow up call on **June 28, 2002**, to discuss the implications of a shorter covered species list. We identified the problems associated with attempting to feed one fish-eating bird species and not others and the potential limitations of a Salton Sea stocking program. The length of the permit and the length of the obligation were also discussed. The length of the obligation can be based on the modeling or the results of field sampling, but the start and end dates should not be based on a combination of the two. There are nest site issues associated with some of the species on the covered species list that the agencies would like to see addressed.

Later on **June 28, 2002**, the Service met with the Bureau of Reclamation to discuss options for ESA compliance. All acknowledged that the HCP was the best approach, but this approach may not meet the deadline. A section 7 approach would focus on the listed species only, but other specific details are yet to be defined. The Bureau is developing a Biological Assessment (BA), and they also are planning supplemental documentation under NEPA. They are hoping to maintain both options (IID completes their HCP with mitigation for covered species versus section 7 consultation on the federally listed species) well into the process to allow IID every opportunity to move forward and complete their HCP, but the Bureau would like to have a contingency plan should that not be possible by the end of the year.

We followed up that call with a brief call to staff of the CDFG. We discussed the fish stocking approach as an alternative mitigation that could be considered to allow for on-farm and systems water conservation. The best approach to this mitigation is to base the timing on field sampling. We can focus the stocking season on the brown pelicans, but we have to consider the white pelicans where there is overlap in presence to assure that adequate forage will remain available for the brown pelicans. Double-crested cormorants may not need coverage given their status in California, but there are still concerns about gull-billed terns and black skimmers.

Service and CDFG staff met briefly via teleconference on **July 9, 2002**, to discuss the options relating to California brown pelicans. Mitigation in Mexico is problematic for CDFG because it does not maintain the species in California. Mitigation on the California coast is problematic because it may not address the management unit (population) impacted by the changes at the Salton Sea. The possibility of short term fallowing for water conservation along with a fish stocking program is still being considered as mitigation, but there is no way to guarantee that the duration of this activity will match the impacts as predicted by the model.

The Service, CDFG and the water agencies met via teleconference on **July 11, 2002**. The focus of the discussion was the brown pelican as the listed fish-eating bird of greatest concern at the Salton Sea. We discussed the numbers of brown pelicans using the Salton Sea versus coastal and Gulf of California numbers. We could not confirm CVWD's contention that the Salton Sea birds were only 1% of the population. We discussed the role of the Salton Sea for this species; its importance is based on the numbers of birds (3-4,000 annually) that come there. The concept of feeding the birds in Mexico was raised. This is problematic for CDFG to permit as there is no demonstrable benefit to brown pelicans in California; in fact we would anticipate a net decrease of this species in California under this scenario. This would also be problematic in that we would need to rely on another government to enforce the requirements of the permit. Any feeding scenario requires that enough fish be provided so that the brown pelicans receive the required quantity of fish while accounting for the foraging by other species that we know will occur. It may be difficult to take actions to enhance fish production or reduce fish utilization in the Gulf of California such that adequate forage could be guaranteed. This could require adjustments in the regulation of fisheries management in Mexico. It would also be difficult to document that the necessary benefits had been accrued.

The group also discussed the possibility of a short term fallowing program as part of the water transfer. The hypothetical scenario limited the water transfer to the first term of 45 years, and it included the exclusive use of fallowing for the water transfer for the first 5 years. Starting in the 6th year, conservation would occur through improvements in irrigation efficiency. Without seeing a prediction of the salinity and elevation changes under this scenario, it was difficult to determine what mitigation would be needed. IID was not offering mitigation water under this scenario, but the interim fallowing would reduce the speed of the salinity changes by some unknown increment. This would provide some additional time to plan a restoration project. The discussion was brief as a result of the lack of the necessary background information, but the agencies agreed to consider the possibilities in a future discussion.

Service staff participated in a conference call between the Assistant Secretary for Water and Science and the CDFG Director on **July 17, 2002**. The Assistant Secretary reported on the meeting that had just been concluded with the four California water agencies. The Assistant Secretary relayed to the Director that the water agencies were considering participation in the approach being developed by the Bureau. Given the short time frame remaining, it does not appear feasible to complete the HCP. Section 7 provides an option for ESA compliance, but the State needs to be included in that process. The Director expressed his deep concerns that the

differences between the section 7 and CESA requirements may limit the ability to completely address the CESA requirements through section 7 of ESA. The nexus for the section 7 is proposed to be a set of fish and wildlife conservation measures to be undertaken or facilitated by the Bureau for listed species as called for under section 7(a)(1) of the ESA. The desert pupfish, Yuma clapper rail, southwestern willow flycatcher and the brown pelican are to be addressed. Mitigation is a difficult issue for the brown pelicans as extra-territorial actions are likely precluded by time and may be precluded under CESA given the circumstances. Fish stocking to the Salton Sea has not been received well on any front. The 5-year fallowing proposal by IID is still being considered, but the benefits to the salinity of the Sea are quite limited. Coastal mitigation is of concern because that breeding group of birds is considered a separate breeding population from the birds that use the Salton Sea. Making changes to address forage availability is also difficult as it is outside the Service's jurisdiction. Section 7 offers an advantage in that it does not require legislation.

A follow up call occurred on **July 18, 2002**, that included the water agencies. The water agencies expressed a willingness to participate in the section 7 process; a formal recognition of that will be forthcoming in the form of a letter. All acknowledged the need for the Federal process to parallel the State process, especially given the difference in standards between the two. The project description will be a key aspect to bringing the State and Federal processes together. Voluntary conservation measures will serve as the core of the Bureau action, with the water conservation being addressed as cumulative effects. Given the difficulty in identifying mitigation for the brown pelican, additional work will be required to bring the two processes together.

Another call followed on **July 18, 2002**, between the Service and CDFG to discuss more information on the status of the California brown pelican. We discussed existing threats and potential beneficial actions, but off-site enhancements opportunities in California are limited. We briefly discussed the status of the de-listing action and upcoming research efforts on the species.

The Service conferred with the Solicitor's Office in Washington and the Bureau of Reclamation on their proposed section 7 approach via teleconference on **July 19, 2002**. The Service received clarification that the focus of the effort is the voluntary wildlife conservation measures, but that the section 7 analysis would need to include the interrelated effects of the water conservation measures that are part of the entire operational change on the Colorado River. The Bureau is currently developing the BA including the project description, so the discussion focused on general process issues. The Service will need to work with the Bureau in the development of the project description, and ultimately the effort will need to extend to CDFG to assure that the process is compatible with the State's. The need for the Bureau to complete an agreement with the water agencies that also triggers the need for the proposed conservation measures will tie the actions together as interrelated. We briefly discussed some of the issues with brown pelicans; the Service and CDFG are still working towards solutions that work under both sets of requirements. Coverage of the water agencies under the Incidental Take Statement can be extended if they have applicant status; we are waiting on official word as to their willingness to participate in the process. We briefly discussed Fish and Wildlife Coordination Act issues, and the Bureau was

willing to review their project description with that potential need in mind. They did state that most of these issues would be addressed through the NEPA process. The Migratory Bird Treaty Act will be addressed per the Section 7 Handbook. The intention is to address water conservation-related impacts only; broader maintenance issues will need to be addressed directly by IID. It was suggested that this aspect could be addressed after the deadline.

The water agency Principals met with the Director of the CDFG, the Regional Director of the Bureau, and Service staff on **July 22, 2002**. The Bureau provided a description of the information included in their draft BA. This includes a focus on voluntary endangered species conservation measures as the core of the project. The water agencies would be brought into the process through conservation agreements (these would be binding agreements). As participants they could directly implement some of the measures or could provide funding to the Bureau for these actions. As a result of their participation, the water agencies would be covered under the incidental take statement for their actions as part of the overall water conservation and transfer program (extending beyond just the fish and wildlife conservation measures). The measures included are based largely on measures taken from the draft HCP for the Yuma clapper rail, desert pupfish and southwestern willow flycatcher. The Bureau has made a no effect determination for the bald eagle, razorback sucker, and the mountain plover. Additional measures were proposed for the California brown pelican. This included a suite of actions that could be combined into a conservation program. The program would begin with surveys to better understand the use of the Salton Sea and its importance to this population of California brown pelicans. The conservation program would include a pelican conservation fund that could be used to increase breeding success by protecting breeding sites or by boosting forage availability, although the specific methods to be used have not been identified. The group discussed the possibility of implementing some of these actions in Mexico and possible avenues of carrying such actions out (e.g., the Trilateral Commission that includes the U.S., Canada, and Mexico has coordinated actions in Mexico that were funded by the U.S.). This process would provide the needed ESA coverage for impacts to listed species resulting from the project, but it would not provide any assurances to the Bureau or the participants. CDFG raised concerns over the need to quantify the take of brown pelicans so they can determine if the proposed program constitutes full mitigation. They also raised concerns that the use of this approach may jeopardize the current support of the environmental groups for Senate Bill (SB) 482 dealing with fully protected species under state law. Additional concerns were raised regarding the CEQA requirements for the project and the certified EIR for the project. It would not reflect accurately the mitigation being contemplated for the project, and supplemental documentation may be required. It may be possible to address this need through the Final EIS that has not been released. The SWRCB record also does not reflect this change.

We also discussed the potential role of interim fallowing to provide additional time for implementation of the restoration program. That would not be required for the project as described in the Bureau's draft BA, but could be incorporated into the project if that helps to meet state requirements. IID is only open to fallowing on such an interim basis. They are looking for some kind of assurances that the fallowing can stop after 5 years and they can proceed with

efficiency conservation. They are concerned about the current version of SB 482 requires fallowing through the year 2030. The Bureau was very concerned about IID requiring legislation to provide the desired assurances for efficiency conservation. The water agencies were clear in that this interim fallowing would not be implemented in order to revisit the permit process at the end of 5 years, only to provide the restoration program more time. Permitting needs to be for the duration of the transfer as required by the Interim Surplus Guidelines and the QSA.

The remainder of the meeting focused on the topic of coverage for state-listed species through the section 7 process. It will be necessary to analyze the impacts on state-listed species and provide for full mitigation of those impacts if CDFG is to issue a consistency determination based on the Service's biological opinion. A 2081 permit is also an option, but this requires more time and possibly more mitigation. Concerns were raised about other Salton Sea species that may be impacted, even to the point of future listing, but the water agencies responded that some of these other species have provided insurmountable hurdles and we need to move forward. The Bureau reminded the group that these other species will be included in the NEPA process. We discussed the need for further refinement of the measures pulled from the HCP as part of this expansion of the section 7. IID expressed the desire to still pursue the HCP as they are wanting the associated assurances. We discussed possible ways to divide the coverage between the two process: geographically (Salton Sea versus Imperial Valley) or functionally (project-related versus maintenance-related). The Service and the Bureau will confer with the Departmental Solicitors on the issue, and CDFG will confer with their counsel. The group identified one species (the California black rail) that should be addressed if a project-related consultation is going to move forward. Four other species will be considered. Staff from the Bureau, the Service and CDFG will evaluate the species and the project description to determine what will need to be added to expand coverage for the state-listed species. Fully protected species are still an issue, and the process cannot move forward if SB 482 fails. We discussed the possibility of legislation that would provide the environmental groups with a State and Federal "statement of intent" in regards to restoration of the Salton Sea, but that may not be possible this year. We identified specific tasks that were needed to resolve the various issues raised, and the meeting was adjourned.

Carlsbad Service staff participated in a conference call on **July 23, 2002**, to discuss the approach to finalizing the EIS. Staff from the Bureau, CH2MHill, and IID participated in the call. The document will be stripped of references to Approach 1 for the Salton Sea and Approach 2 will be revised to reflect that it is now maintaining 60 ppt until 2030. IID raised the concern that the document cannot reflect different conclusions from the previously certified EIR or they will have to re-circulate and re-certify the document. For the Service to adopt the Final EIS, we must be satisfied with the responses to all of the Service comments provided on the draft. If we are, the Service files a Notice of Availability and issues a Record of Decision in parallel to the process carried out by the Bureau. Given the time frame for review of the comments in finalizing the EIR, the Service was not afforded the opportunity for a comprehensive review of the responses to our comments. It will be necessary as part of the finalization of the EIS to conduct such a review so that adequacy can be assured and supplemental documents can be avoided.

Staff from the Service met with the CDFG, the Bureau, and the Principals from the water agencies on August 2, 2002. The focus of this meeting was ESA compliance. The Director of the CDFG pointed out that we aren't just dealing with ESA and CESA compliance. In order for the State to permit the project, SB 482 (the Kuehl bill) must pass. This will not occur if the environmental groups all oppose the approach we are taking. MWD raised the possibility of combining a group of different approaches that cumulatively would get us close to the concept of no impacts for 19 years. This included the substitution of water transferred from the Palo Verde Irrigation District (PVID) to MWD for the first 5 years of the transfer then ramping down to zero by the end of the tenth year. So called evapo-transpiration (ET) fallowing would be used to manage lands and keep inflows to the Salton Sea at the baseline (this also avoids beneficial use questions). We agreed that the term "material impact" in SB 482 needed to be defined as this would determine more specifically how close the project needed to match baseline. IID would like to see the elevation of the Sea go down to reduce their liability associated with potential flooding of lands behind the levies at the south end of the Sea. The Bureau and the water agencies stated that there needs to be a way to permit this without a re-opener. This is difficult under section 7 of the ESA and only applies to the listed species. We were discussing standards for the mitigation when it was realized that the 19 year figure may have been used incorrectly. The resource agencies met separately to resolve this issue and determined that a 15 year period of no impacts to the Sea (i.e., keeping the Sea at baseline for the first 15 years of the project) would be appropriate minimization that the environmental groups might accept. Offsite mitigation would then be developed for the remaining impacts to the California brown pelican so that the fully mitigated standard could be achieved, and CDFG could do a consistency determination. This determination would be made again if the consultation process was ever re-initiated. The water agencies were still looking for a way to get assurances given the commitments in with the QSA.

We discussed the potential implications of this approach. CDFG felt that the requirements of SB 482 could still be met through this process. IID wanted to assure that the socio-economic impacts be addressed in the Imperial Valley if this approach was going to be implemented. The water agencies will need to provide a package that meets the baseline for the first 15 years and provide supporting model runs on it that identify the impacts to the Salton Sea of this approach. CDFG and the Service will then work to quantify the impacts and identify a set of mitigation measures that would fully offset those impacts. The Director of the CDFG was hopeful that the environmental groups would be satisfied with this concept. The water agencies questioned why section 10 and a 2081 CESA permit were not possible. They are a possibility but time is the critical factor. Section 7 and a consistency determination are possible by the end of the year, whereas a permit under section 10 may not be possible in that time. All agreed that the time frame for coverage would be the 75 years provided the conservation package was appropriate.

The Service, the Bureau and the CDFG met briefly to discuss the BA that had been submitted to the Service by the Bureau. The inclusion of the impacts of water conservation as cumulative effects is problematic as this does not allow us to cover them under the Incidental Take Statement. This will be addressed by the Solicitors representing the Service and the Bureau. The

BA also needs to address state listed species that may be affected by the project. Of particular concern are the brown pelican, the Yuma clapper rail and the California black rail which are also fully-protected species.

The Service, CDFG, CH2MHill and the Bureau participated in a conference call on August 5, 2002, to discuss more specifics on the brown pelican. We all acknowledged that various constraints limit us to off-site, out-of-kind mitigation. The key is to determine the equivalence between the impacts at the Sea and the mitigation. There are many projects that have been identified by the American Trader restoration process that would benefit brown pelicans. Most of these are roost enhancements/replacements. We need to quantify the take that would occur at the Salton Sea. The current discussion focuses on first year birds. We need to look at the appropriateness of this assumption. At the conclusion of this process, we will need to have enough specificity to support making the necessary jeopardy/no jeopardy and fully mitigated determinations. The Bureau will put forth the conservation measures and will work with the water agencies to see that they are funded. There are no assurances as to cost with the section 7 process. The Bureau will have the obligation to see that the measures are implemented regardless of the funding agreements used. Although we don't anticipate take for all listed species (CDFG identified the brown pelican, desert pupfish, Yuma clapper rail and California black rails as the species of concern here), the BA should provide an explanation as to the specifics of why the other species are not addressed.

The Service, the CDFG, the Bureau and the water agency Principals met again August 7, 2002, to continue the discussion. Staff from the CDFG and the Service presented information on potential pelican projects that could be incorporated into the conservation measures. These focused on creating/enhancing roost sites on the California coast with special emphasis on Santa Barbara and San Diego Counties. The key is that we are addressing energetics which is the link between foraging and roosting. IID suggested that the CDFG has the jurisdiction to change fishing regulations to offset foraging impacts more directly. The next steps are to quantify the post-minimization impacts of the project and to specify enhancements that will offset the impacts of the take. The water agency proposal would constitute the minimization measures. The water agencies' greatest concern was cost.

We then moved on to the concept of matching baseline for the first 15 years. Several possible definitions were identified:

- matching the mean model output for the baseline,
- matching the confidence interval boundary on the baseline model output, or
- matching the project-related reductions directly.

The Service suggested that the last was the most defensible. IID would like additional elevation reductions to be considered to address flooding risk. The water agencies wanted to know what would happen if the inflow reduction matching did not result in measured salinities within the model predictions. This could result in a re-initiation of the consultation. IID asked if it would be

an unforeseen circumstance under section 10. IID suggested that we still pursue a section 10 permit albeit with a shorter covered species list.

IID does not currently support the 15 year baseline concept. Their Board has approved a 5 year interim fallowing program. Some model outputs were provided for this approach. IID stated that they are not willing to agree to the QSA cap without the monetary compensation that was to come with the transfer of water to SDCWA as would occur with the PVID substitution. The Bureau suggested a potential funding approach to offset this so that the PVID substitution could be included as the 5 year fallowing program is unacceptable. IID presented model runs for a 10 year and 15 year hybrid plan, but both fell short of the baseline projection. MWD also presented model outputs for their proposed package, but they were also slightly short of the baseline and required more fallowing by IID. The water agencies are scheduled to meet on August 8 to discuss and resolve these issues. CDFG will need a response before the upcoming hearing on SB 482. CVWD suggested that a commitment of funding from the state to address socio-economic impacts would be helpful. The water agencies provided their individual concerns but committed to trying to reach consensus.

Staff from the Service and the CDFG attended a meeting between the water agencies and the Secretary of the Resources Agency for the State on **August 12, 2002**. Secretary Nichols and CDFG Director Hight provided the water agencies with a summary of the meeting they had held with the environmental groups on the proposed approach for the water transfer. The environmental groups were open to the concept, but they were also looking for some commitment on the part of the State and Federal governments in regards to Salton Sea restoration. The groups apparently accepted that the 15 year concept is based on the baseline that several of them had objected to in their comments on the EIR/EIS. It was not clear whether they understood that we would be matching the mean of the baseline rather than the confidence interval boundary. The Resources Agency is hopeful that they can become a partner in the restoration efforts with the Bureau, and they are looking to issue the upcoming Alternatives Report jointly. A joint policy statement or Memorandum of Understanding (MOU) are possible mechanisms that could be used to establish this relationship. Such mechanisms are much more likely to be completed by the end of the year than additional legislation on the topic. The topic of socio-economic impacts was also raised, and Secretary Nichols is waiting to receive input from Imperial County on the types of projects that they would like to see implemented to address these impacts. The State is not likely going to be able to provide funding, but it may be able to provide support in the form of waiving taxes/fees to facilitate the needed infrastructure.

The discussion then moved on to the pelican proposal. The Service and the CDFG are still pursuing additional information on the pelican roost concepts, and additional support in the form of engineering expertise will be needed. The SDCWA had made some contacts with the Navy on the Zuniga Point option that they will forward to the Service. The water agencies have identified seven potential scenarios to get to the 15 years at baseline. They were not prepared to share any specifics, but they hoped to have this narrowed down to a single package by **August 26, 2002**. This package will include a flexible combination of fallowing, PVID substitution, and

groundwater extraction to get to the goal of baseline for the first 15 years. They will be running the scenarios through the Salton Sea model to narrow the field. At the same time they are trying to come to consensus on the quantification of the economic impacts.

IID reminded the group that they are still interested in completing the HCP for the Imperial Valley. They do have concerns that have not been addressed (species coverage, assurances) in our current focus on the Salton Sea. IID would like to meet with the Service and CDFG to resolve the remaining issues. MWD also acknowledged that there are still issues that need to be resolved relative to the action on the Colorado River with CDFG.

Following the meeting with the water agencies, Service and CDFG staff met to discuss where we go from here. Additional CDFG staff resources were identified to assist in getting cost estimates for the pelican roost projects, but staff was instructed to focus on the biological justification for the approach. We were in agreement that our focus for these projects should be on creating new roost habitat, and projects that restrict recreational access will not be included. We need some level of assurance that the identified projects will be implemented. Assurances will not be possible given that we are dealing with section 7 on the federal side, and they will not be providing a conservation strategy for the Salton Sea in their HCP. Completing the "in-Valley" portion of the HCP will still be difficult in the time remaining. We will need to determine the appropriate time for public review when the Notice of Receipt of Application is published.

The Service, the Bureau and CDFG met on August 22, 2002, to discuss the BA. We began by going through the discussion on the Yuma clapper rail and identifying the changes that were needed. The use of the 21 acre figure was apparently in error, and it is the Bureau's intention to create a total of 73 acres of managed marsh. Of this acreage, 31 acres are for salinity-related impacts and 42 acres are for selenium-related impacts. We agreed to a 10 year time frame for completion of the marsh. The Bureau committed to water of the same selenium concentration as Colorado River water or water that was of a lower concentration than a future water quality criterion that had received a "No Jeopardy" determination from the Service. As the main components of this strategy were substantially similar to the HCP strategy, no other changes were made. We also discussed long-term management and agreed that management should be in perpetuity for that acreage associated with permanent changes in the irrigation system. For the remaining acreage, we agreed that this would need to be addressed prior to the end of the project. The biological opinion will not include take coverage for closure of the wetlands.

We had a more lengthy discussion on the southwestern willow flycatcher. This approach should consider the latest research on suitable breeding habitat. The Bureau has access to this information, and it will be incorporated into the measure. We discussed some of the complications that may be associated with the surveys required for this approach. One problem is that we are lacking key information in regards to the timing of changes associated with the 15 years at baseline concept. Without that we were not able to specific time lines for the monitoring. We agreed that the initial evaluations and baseline surveys need to occur before any water

conservation actions that could impact the potential habitat start. The specifics of the monitoring will be developed in the monitoring plan that will be subject to Service and CDFG approval. Another complication involves the fact that normally projects requiring surveys that employ tape-recorded calls address that take within the project biological opinion. The Bureau was not comfortable with this approach and will consider the additional requirement that all surveys will be conducted by personnel with 10(a)(1)(B) research permits from the Service. Another alternative is to address all suitable habitat and not conduct breeding bird surveys. The Bureau will consider this approach. The BA also needs to strengthen the argument that there are no impacts associated with loss of migration habitat. The Service and CDFG referred the Bureau to the "nearest patch" analysis done for the Coachella Canal lining project.

The California black rail will be added to the BA. The acreage of marsh mitigation is believed to be conservative enough to include them given the salinity acreage is based on the most sensitive vegetation and the selenium acreage was based on total vegetated acres. The mountain plover needs additional analysis to reflect its specific habitat preferences and the possibility that only hay crops may be fallowed. The Bureau is considering modifications to the determinations for the mountain plover and the razorback sucker to may affect, not likely to adversely affect, as they are more defensible. The razorback sucker has not been found in lateral canals based on the collective memories of those involved in the discussion, but they have been found in the major canals so impacts from canal lining may be possible.

Following this discussion, the group participated in a call with several pelican experts and representatives of the water agencies. The purpose of the call was to attempt to quantify the impacts to brown pelicans that will result from the early loss of fish at the Salton Sea resulting from the water transfer project and to quantify the benefits that may be associated with roost enhancement projects on the southern California coast. An economic analysis was used (as is done in natural resource damage assessments) to determine an equivalency between bird impacts at the Salton Sea and bird benefits on the coast given an assumed life of the enhancement project. Based on the discussion, it appears that the primary impacts are to birds that disperse widely after the breeding season. Juveniles tend to disperse more widely than adults, and it is possible the projects on the coast could be designed to specifically target this age group. They tend to prefer estuary areas over the open water off the coast. It should be possible to do wetland enhancements that will increase fish production as well. Service and CDFG staff will continue to gather information that will assist us in quantifying the impacts and the benefits needed to fully mitigate those. The mitigation standards will need to be developed from this information in case specific projects cannot be identified in time to complete the consultation. On August 23, 2002, Service, CDFG and Bureau staff visited the Buena Vista Lagoon to discuss enhancement possibilities that could provide for pelican roosting and/or foraging. Given existing water quality problems, a more comprehensive restoration is needed in order to accommodate brown pelican use at the lagoon. It is still being considered, but existing uses could not be impacted as a result.

A conference call was held to discuss the status of the Final EIS on August 26, 2002. Staff from the Service, Bureau, IID and CH2MHill participated. The Final EIS is on schedule and will be

delivered in a draft from to the Bureau and the Service on **September 16**. Currently, **5 days are scheduled for review** of this version of the document. Most of the call was focused on the Service's recent comments on the Final EIR. We discussed the strategy for this document, and the Bureau and IID acknowledged that supplemental documentation will likely be needed given the potential changes associated with ongoing negotiations. By finalizing this document now, the supplemental document can be tailored to address only the changes. We addressed the other Service comments and identified a strategy for each. These will be discussed internally by Service staff and management.

The Service, Bureau and CDFG re-convened on **August 29-30, 2002**, to continue the discussion on the BA. We discussed the need for additional clarification on the acreage of tamarisk scrub that is being addressed. The Service and CDFG indicated that the HCP was addressing all of the tamarisk that was impacted, and we were not clear on the document's inclusion of only a portion of the tamarisk in the "project area". We then went on to discuss the desert pupfish. The lack of a refugium pond appeared to be the largest gap relative to what had been agreed to in the HCP. The Bureau agreed to add this to the first measure for pupfish. We also discussed the need to consider a lower salinity threshold and the possibility that unseen physical barriers may exist and become a problem for pupfish movement as the elevation of the Sea goes down. The Bureau agreed to these changes as well. Language will be incorporated from the HCP to indicate more specifically what monitoring will be required, and a requirement for a monitoring plan that is approved by the Service and CDFG will be added. The Service suggested that the document needed additional clarification on how it was decided that species would be included or not included in the different levels of analysis. The Bureau agreed to re-evaluate the language that is currently in the document and add details as needed.

We moved on to the topic of brown pelicans. One of the key steps at this point is to decide how to quantify the impacts to brown pelicans. The Resource Economic Analysis (REA) approach conducted by CDFG is workable, but we need to refine the starting number and the "decay" rate. We talked about various approaches and settled on taking the mean of the available peak counts. We did not use a mean across the season because the use of a mean would not address the turnover of birds between surveys. The use of bird-use days was also considered, but this was thought to unnecessarily complicate any calculations. As long as the same units are used for the impact and the benefit, either unit should give similarly representative results. Based on input from the pelican experts, we do not have clear evidence that either the forage base or roosts sites are limiting. We do know that when roost sites with the appropriate characteristics are made available, the pelicans do use them. With this premise in mind, there are gaps in the availability of roosts along the California coast that we can consider in developing a list of potential projects. As long as the roosts are available year-round, migratory pelicans are expected to use them. We discussed that the impacts may not be equally distributed across all brown pelican colonies in the Gulf of California, but they may be focused on two or so colonies in the northern Gulf based on behavioral observations of feeding at the Salton Sea and in the Gulf. We discussed the need to ramp down the numbers according to some schedule of loss, rather than using the assumption that bird use would instantaneously drop. Using this approach we developed a schedule of pelican

loss by assuming that one third of the birds would be impacted by the change in salinity from 50 to 60 ppt salinity and the other two thirds by the 60-65 ppt change. A small residual number are expected to stay at the Salton Sea. This schedule will be plugged into the REA to determine the mitigation requirement. The number of birds to be addressed by the mitigation depends on the life of the mitigation project. This is still being considered.

We briefly discussed other more general comments. The Bureau agreed to evaluate or comments and incorporate changes as appropriate. It is not clear if a new BA will be provided at some point, or if the changes will be provided in the form of "errata" to update the original document.

A follow up call on the Final EIS occurred on **September 3, 2002**. The topic of the uncovered species and maintenance impacts was discussed, and CH2MHill committed to adding further clarification regarding the relationship of operations and maintenance to existing conditions to the response to the Service's comment. Service staff was asked if the Service concurred with the other resolutions proposed, but feedback has not been received from the California-Nevada Operations Office. The Final EIS is still on schedule for delivery in two parts: Volume 2 on **September 9** and Volume 1 on **September 16**. Comments are due to CH2MHill by Monday morning, **September 23, 2002**.

A brief call was held between the Service, the Bureau, and CDFG to update the status of efforts to move forward on the consultation on **September 5, 2002**. It was brought to the resource agencies attention that IID had contacted the Bureau raising concerns about the scope of the section 7 consultation. IID is still hopeful that the HCP can be completed for the Imperial Valley species and a section 10 permit can be issued by December 31, 2002. IID is elevating the issue with the Service. We have received brown pelican counts for Buena Vista Lagoon, but they also included the beach area and so are of limited value. We have received the results of the latest run of the REA for brown pelicans, and the scale of restoration is on the order of 552 pelicans for the 2030 time frame or 330 for the 2078 time frame. The Bureau will provide revisions to the BA in the form of errata sheets. This will be ready soon for the conservation measure updates we have discussed. During a brief follow up call between the Service and CDFG, we identified the need to develop a restoration package that addresses both roosting and foraging needs. To the extent possible, it would make the most sense to do these in the same location. Should it be necessary to do roost and fish enhancement projects separately, we need to maximize the overlap in benefits. We will use the scale from the REA as a starting point.

A brief conference call was held on **September 16, 2002**, to brief Washington Office staff on the status of the IID water transfer ESA compliance. Issues remain in regards to the what aspects of the project will be covered under section 7 and what will be covered under section 10. The time line is not likely amenable to the completion of both a section 7 consultation and an incidental take permit through section 10 this year.

Service and CDFG staff held a conference call on **September 18, 2002**, to coordinate on pelican mitigation concepts. Staff were in agreement that several of the lagoons in San Diego County can

be considered potential mitigation sites, but some may only provide roost opportunities rather than both roost and fish enhancement opportunities. Space, forage base, and water quality constraints may limit the number of pelicans that can be accommodated in any of these settings. San Diego Bay may offer the best opportunity for a roost in an area with a known fishery resource. We also discussed the need for additional CEQA and NEPA analysis of groundwater pumping if it is to be incorporated into the project mitigation.

Carlsbad staff had a conference call on **September 18, 2002**, with staff from the California-Nevada Operations Office to discuss the letter received from IID dated **August 5, 2002**, and possible approaches to resolving the outstanding issues with the HCP. Seven issues were identified in their letter, and several are complex and require additional evaluation before a solution can be developed.

The Service and CDFG participated in a meeting/conference call with IID on **September 25, 2002**, on outstanding issues related to the HCP. Although final resolutions were not reached, a plan to address each of the issues was developed. The issues discussed include the following. 1) The current proposal for permitting take of Couch's spadefoot toad is lacking a sound basis. We discussed with IID the need to develop conservation goals that they would have to meet prior to the take being authorized. This has been done on other HCPs. These goals would be biologically-based and would support the Service's impact analysis. 2) Permitting take of the other covered species is similarly problematic. We concluded that a similar approach was needed for this group of species as is described above for the Couch's spadefoot with the development of discrete conservation goals. IID agreed to re-evaluate their list and consider removal of species with no known occurrences in the HCP area. 3) The disposition of managed marsh after permit expiration was also discussed. The Service offered the possibility of turning the land over to a third party and water at the agriculture rate as a possible resolution. IID will consider making this commitment of the land to a third party and water at the agricultural rate, but they did not want to be required to continue managing the marsh if no other land management entity agreed to take it. The Service needs to determine if the offer alone is an adequate commitment. 4) Another issue was changed and unforeseen circumstances and where exotic species fit in. We did discuss this issue, and IID agreed to have their consultant try to clarify the commitment with input from the Service on where the ambiguous language occurs. They also agreed to incorporate language into the HCP that identifies the Management Plans as the source of the standards for actions related to routine maintenance and responses to changed circumstances. These will not be developed until after the permit is issued, but they will require Service approval. 5) We also discussed development of justifications that the conservation strategies constitute the "maximum extent practicable". IID agreed to provide additional language in the HCP that gives some indication of the extent of the mitigation and its cost to justify that it would not be reasonable to ask for more. The Service committed to an internal discussion on the issue to determine if this would be adequate to meet the issuance criterion. 6) We also have a problem with addressing third parties and the lack of mitigation requirements from the participants in the program. IID agreed to consider timing restrictions on physical modifications included in efficiency types of conservation as potential minimization measures. They stated that they would not impose requirements on

farmers conserving water through fallowing. The Service recommended that they include a justification for the lack of minimization measures by the farmers in the HCP. 7) The other item that we did discuss was the quantification of incidental take. The Service was clear that take would not be permitted in cases where there was no basis for claiming incidental take. IID requested that take be quantified in habitat parameters to the maximum extent possible, but the Service countered that numbers will be used to the extent that we have the ability to quantify them.

Staff from the Service, CDFG, and the Bureau had a brief coordination call on **September 25, 2002**. In this meeting we identified the benchmark events that keep us on schedule and the significant gaps in our information that remain. The Bureau identified the information that they will be providing in the Errata for the BA as part of this discussion. Resolution on the Federal nexus is still pending.

The Service and CDFG participated in a coordination call on **September 27, 2002**. Bureau staff joined the call in progress. During the call we discussed five issues: brown pelican mitigation for the consultation, an updated project description including a Federal nexus, use of East Mesa groundwater, the time lines for the remainder of the consultation process, and selenium concerns for the desert pupfish. The primary issue for the brown pelican is determining what projects will fully mitigate the impacts. The Bureau agreed to follow up with the Washington Office staff on the Federal nexus issue. Although we will continue to track the potential for use of East Mesa groundwater, it will not be considered part of the project at this time. The consultation period officially closes **October 23, 2002**, and the Bureau will attempt to have the updated project description to the Service by that date. The biological opinion is due **December 9, 2002**. The Service will be working internally to more closely evaluate the water quality issues with the desert pupfish.

A conference call was held among the Service, the Bureau, IID and CH2MHill on **September 30, 2002**, to discuss the water quality results being developed for the Final EIR/EIS. The results indicated an unexpected result for total suspended solids (TSS) in the 75-year run for Alternative 4 (all fallowing). Because the modelers could not explain the result to everyone's satisfaction, it was decided that it would be best to use the original 12 year results and discuss the conclusions qualitatively. In the discussion the margin of error for this constituent was considered to be rather high suggesting that the presumed benefit seen in the 12 year model results was as questionable as the results in the 75-year run. The results will include an explanation of potential modeling error.

Staff from the Service and CDFG participated in the water agency meetings held at the MWD headquarters and facilitated by Assembly Speaker Emeritus Hertzberg on **October 1 and 2, 2002**. The purpose of these sessions were to develop terms to address the remaining areas where agreement had not been reached. Three main topics were addressed by subgroups within the larger meetings: designing the fallowing program, addressing socioeconomic impacts, and achieving environmental compliance. In between sessions, the Service and CDFG met to discuss outstanding issues including the brown pelican mitigation program, the PVID fallowing program,

and coverage of the PVID-MWD transfer or lack thereof under existing Federal and State permits and CEQA/NEPA documents. No state permits have been issued for Colorado River impacts as the applications will not be submitted until SB 482 is in effect with the signing of the QSA.

The farming group developed an approach to fallowing called "low impact fallowing" as it reduces socioeconomic impacts. This fallowing would place more emphasis on the field crops rather than the labor intensive vegetable crops. This will have to be considered in analyzing the impacts of the program on species reliant on field crops for foraging.

The focus of the second day was the development of the term sheet for environmental compliance. Three basic categories of mitigation were considered: up-front commitment of funds, post-termination mitigation requirements, and new listings/unforeseen circumstances. Agreement was reached between the water agencies on the obligations related to the first two, but the third issue was problematic. IID was particularly concerned about this issue given the reduced coverage associated with a section 7 consultation versus a section 10 permit. IID is still pursuing the HCP, and the QSA (as written) will not become effective until the permit is received. This would not preclude signing by December 31, 2002. CDFG raised concerns over the need for additional CEQA analysis with a change in mitigation, but IID offered to provide documentation that they have adequately bracketed the impacts. The Service will likely need additional NEPA analysis prior to issuing a section 10 permit. One outstanding issue remaining was whether the QSA terminates should the water transfer have to stop for environmental reasons or should it be suspended until the impacts are addressed and the transfer can resume. IID prefers the latter because it protects them from challenges regarding beneficial use.

On October 4, 2002, Service staff met with CDFG and Bureau staff to discuss brown pelican mitigation. After discussion and input from CDFG, it was decided that the pelican mitigation should include at least two roost sites. These roost sites will require use by a minimum of 100 pelicans each in 3 of the 5 years worth of surveys scheduled to begin one year after project completion. The total number of pelicans addressed will be based on the salinity curve for the 15 year plan and the model output from the REA based on that schedule. For full mitigation a 3:1 ratio will be required by CDFG. The estimated total was approximately 1,000 birds, but the final total is still pending. We suggested that it would be appropriate to have the projects in place by 2010 so that the 5 years of surveys will be complete by the end of the 15 year plan period. This number of birds is required for the life of the permit. Long-term maintenance, monitoring, and adaptive management should be included as part of the program. The Santa Barbara coast and San Diego Bay were identified as the appropriate areas for the two roosts as these are the largest gaps in roost availability for brown pelicans. If these two projects do not meet the success criteria, additional roosts will be required in one of the identified sites or other appropriate sites identified in the future. A barge was recommended for the Santa Barbara site, and floating structures that provide roosts but do not shade the area below were recommended for San Diego Bay.

A second meeting was held on **October 4, 2002**, to review with IID the conservation measures in the Bureau's project as compared to the HCP strategies. There is a high degree of overlap between the two, but the Bureau's program does not provide for coverage of maintenance activities. IID raised the point that some of the measures, such as pupfish connectivity measures will require maintenance. This will be considered. IID would like the conservation program elements to mesh with the future HCP to facilitate the transition. IID also raised concerns about the elements that were added as part of the conservation measures under the Bureau's program and what responsibility they might have for those actions if a future HCP supercedes the section 7. Additional discussions will be required to resolve this issue. The Bureau committed to incorporate additional detail from the HCP on monitoring and management of the conservation measures. IID will discuss internally if they would like to pursue HCP coverage for the brown pelican or other Salton Sea species, but they are aware that the current program would only cover brown pelicans.

A short conference call was held between the Service, CDFG and the Bureau on **October 11, 2002**. During this call we discussed the pelican mitigation package, and it was decided that the information would be shared with the water agencies for their consideration at the upcoming "Hertzberg" meeting scheduled for **October 12-15, 2002**. The Bureau is concerned that it will be necessary to estimate the costs associated with this in order to develop conservation agreements with the water agencies. By providing the concepts to the water agencies, they will be able to tap their engineering resources to develop cost estimates. We discussed the section 7 approach, and it was decided on a recent conference call that the water conservation activities will be considered interrelated/interdependent with the voluntary fish and wildlife measures undertaken by the Bureau. Service staff from the California-Nevada Operations Office participated. The analysis of the California black rail (as a "state-only" listed species) will be considered technical assistance. Given that the conservation measures for the Yuma clapper rail are the same, there will be enforcement capabilities for these measures. We discussed that the incidental take exemption will need to be contingent on the conservation agreements with the water agencies being signed and the conservation measures being implemented. We went over the schedule for the consultation and the NEPA process. The final information from the Bureau will be submitted to the Service on **October 23, 2002**, and a draft of the biological opinion is due to the Bureau on **November 25, 2002**. The final signed biological opinion is due **December 12, 2002**, so that the Consistency Determination from CDFG and the Record of Decision (ROD) by the Bureau can be completed prior to **December 31, 2002**.

The Service, CDFG, Reclamation and CH2MHill held a conference call to discuss the desert pupfish and selenium on **October 16, 2002**. The primary concern is that the existing information suggests that the selenium concentrations within the drains that will result from the project may pose a jeopardy to the pupfish. The focus of our discussion was to find a way to use monitoring to identify a problem before it becomes too serious to manage. Concerns were raised about the model predictions as many drain concentrations have already exceeded the predicted levels. There is great uncertainty associated with the ability to predict changes because the program is voluntary, and we don't know which fields will be involved. Because of the structure of the 15-

year minimization plan being discussed, we will have time to collect field samples and establish the selenium baseline in the drains, conduct the laboratory studies on pupfish sensitivity to selenium, and do baseline surveys consistently throughout these drains to get a better understanding of their use of the drains. Concurrently with those activities, we hope to be able to develop a more consistent method to survey for the species. The group agreed that the time frame of the ramp up of on-farm and system conservation should allow for a monitoring program to identify problems for adaptive management rather than simply document the loss of pupfish in the drains. Given the nature of the program, we will probably not be able to prevent selenium contamination in the drains, but we will have options as to how to treat for it to reduce pupfish exposure. Ultimately, we hope to have a trigger number, either in surrogate fish tissue or in prey items, that can be measured simply and used to determine when adaptive management actions are necessary.

Another call was held on **October 16, 2002**, to discuss the status of the HCP with the Service, CDFG, and IID participating. Rather than discuss specifics of the HCP, we discussed the process that we will be undertaking upon completion of the consultation. The condition now on the QSA is that the HCP is to be complete and the permits issued within one year of the QSA being signed. This is still an ambitious time frame, but it can be met with a concerted effort. IID is still the applicant, but the other water agencies will be taking a much more active role. However, IID does not want to re-open issues that they felt were closed. IID also wants to maintain control over their operations, and they would like to be more involved in the consultation with the Bureau. On the PVID aspect, MWD does not feel they need permits for the in-valley activities.

A brief conference call was held between the Service, CDFG and the Bureau on **October 17, 2002**, to discuss the methods used to quantify the loss of brown pelicans at the Salton Sea. It was decided to put more emphasis on the loss of tilapia rather than the other fish species because these other species are believed to make up a very small part of the pelican's diet. Rather than assume 1/3 loss of the population from 50 to 60 ppt and 2/3 from 60 to 65 ppt, we will assume 10% loss from 50 to 60 ppt and 90% (less the remaining 25) from 60 to 65 ppt. This will be incorporated into the new REA.

Staff from the Service, CDFG, and Reclamation met with staff from IID, MWD, SDCWA, and CVWD to discuss the section 7 consultation on **October 18, 2002**. The purpose of this meeting was to familiarize the water agencies with the voluntary conservation measures that they will be funding as part of the conservation agreements. As we discussed the measures, several issues were raised. With the pelican mitigation, SDCWA identified the need to let the date the obligation must be met by slip if significant numbers of brown pelicans continue to use the Salton Sea longer than we had anticipated. They did not object to the use of the REA, but SDCWA and MWD objected to the 3:1 ratio for full mitigation. This will be raised to higher levels in CDFG. We discussed the pupfish conservation measures, and IID counsel identified the need to examine how these measures might conflict or relate to the State Water Resources Control Board's draft order as it relates to selenium concentrations in the drains. MWD and SDCWA were very concerned about the water quality requirements for the created marsh as too limiting. They don't see this as a beneficial use of Colorado River water. The Service stated that we cannot approve

mitigation, including mitigation for selenium impacts, that involves the use of selenium contaminated water at levels believed to cause direct impacts to the species being addressed by the mitigation. CVWD identified the potential to use tertiary treated wastewater rather than Colorado River water which is acceptable provided it does not result in other problems. We discussed the role of the consultation process versus the HCP process, and the water agencies would like to see language in the biological opinion that describes how the take exemption in the biological opinion and the incidental take permit would function given they overlap. IID and CVWD identified the need to see the conservation agreement(s) and the estimated costs for these activities. Reclamation is working on developing those. IID also asked that operation and maintenance activities be included in this process as necessary for carrying out the requirements of the project, including delivering drain water to the Sea. They are anxious to move forward with the HCP as they do not want long-term involvement of Reclamation and the other water agencies in their day to day operations.

Per a brief phone conversation with Bruce Ellis of the Bureau on **October 23, 2002**, the addition of rail surveys to Rail Measure 3 and the word "monthly" to the sentence on brown pelican surveys in Brown Pelican Measure 1 were approved.

A meeting was held on **November 26, 2002**, among the four water agencies, the Service, CDFG, and CH2MHill to begin the next round of discussions on the water transfer HCP. At the request of MWD, SDCWA, and CVWD this meeting was to update their staffs; no discussions of how to resolve issues took place. IID had prepared a draft schedule that provides benchmarks in order to complete the permitting process by the end of 2003. Concerns were raised that inadequate time was made available to resolve all issues with the HCP, but the deadline may slip if negotiations extend beyond mid-February. The other three water agencies asked to be provided with copies of the current form of the HCP and IA documents along with copies of pertinent correspondence. IID will provide this information. The group reviewed the list contained in IID's August letter to the Service. The nature of these issues should not preclude completing the process on schedule given that some work has already been done to address these issues. CDFG will need to provide input on how SB 482 figures into the process and what the specific requirements/changes will be. The Service committed to seeking guidance on whether a 60- or 90-day review period will be required for the HCP given that it has already been out for public review. This will depend, in part, on the changes that are made from the previously-released version. Another issue that will need to be resolved is whether or not the Salton Sea species are included. The role of the current section 7 should be addressed in the biological opinion being drafted for the Bureau relative to the long-term desire to have those conservation activities fall under the section 10 permit that would be issued relative to the HCP. The Service is developing the appropriate language.

A conference call was held between the Service and the Bureau on **November 27, 2002**. This call provided an opportunity for the Service to update the Bureau on the status of the draft document. The Bureau brought to the Service's attention their concerns about how the fish and wildlife conservation measures and the water conservation activities may be characterized in the draft. We discussed the application of the concept of interrelated effects and concluded this could be

used to characterize the water conservation activities. We also discussed the term of the biological opinion. It will remain in force until the incidental take exemption is no longer needed as a result of the issuance of an incidental take permit. We discussed some of the terms and conditions and the addition of new commitments. This is within what the regulations allow provided these additions constitute minor changes and provide for the avoidance/minimization of incidental take. Some of the standard language in regards to the Bureau's ability to enforce the terms and conditions would need to be reconsidered in light of their role in this process. The Bureau did see the need to provide oversight of documenting the implementation of the measures. The conservation recommendation needs to be re-worded to take into consideration that Congress has only authorized Reclamation to complete studies and pilot projects. We discussed the mountain plover and the difficulties we are having completing the analysis because we are lacking key information regarding this species' winter habitat requirements. Additional studies are required to gather this information in order for us to complete the conference. The Bureau requested that we not conference on that species at this time. Given the current HCP schedule, it will be possible to consider this species needs in the HCP prior to any major changes in the agricultural activities in the Imperial Valley associated with the water transfer. The types of management actions likely to be required fall more appropriately under IID's authorities than those of the Bureau. This change will be reflected in the draft biological opinion submitted to the Bureau on **December 2, 2002**.

**FUNDING
AGREEMENT
AMONG THE BUREAU OF RECLAMATION,
THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA
AND
THE SAN DIEGO COUNTY WATER AUTHORITY
REGARDING**

IMPLEMENTATION OF CONSERVATION AND MITIGATION MEASURES IDENTIFIED IN UNITED STATES FISH AND WILDLIFE SERVICE BIOLOGICAL OPINION DATED JANUARY 12, 2001, "FOR INTERIM SURPLUS CRITERIA (HEREINAFTER "GUIDELINES"), SECRETARIAL IMPLEMENTATION AGREEMENTS, AND CONSERVATION MEASURES ON THE LOWER COLORADO RIVER, LAKE MEAD TO THE SOUTHERLY INTERNATIONAL BOUNDARY ARIZONA, CALIFORNIA, AND NEVADA"

This Agreement is entered into among the United States Department of the Interior Bureau of Reclamation (Reclamation), The Metropolitan Water District of Southern California (MWD), and the San Diego County Water Authority (SDCWA) (collectively the "Party" or "Parties") in view of the following facts:

- A. The Secretary of the Department of the Interior (Secretary), acting through Reclamation, is responsible for managing the beneficial use of Colorado River water as reasonably required under a legal framework known collectively as "the Law of the River" and, in effect, is the Water Master for the lower Colorado River.
- B. The Colorado River Board of California, together with MWD, SDCWA, Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), and others have formulated the May 2000 draft of California's Colorado River Water Use Plan (4.4 Plan), a major part of which is designed to

reduce California's reliance on surplus Colorado River water in excess of its normal year apportionment of 4.4 million acre- feet. IID, CVWD, MWD, and SDCWA have entered into agreements relating to, among other matters, their respective beneficial consumptive use of Colorado River water and desire that, for the term of this Agreement, Colorado River water be delivered by the Secretary in the manner contemplated in the Colorado River Water Delivery Agreement (hereinafter "CRWDA"). For purposes of clarification, draft documents named in the BA and BO as "Secretarial Implementation Agreements for California Water Use Plan Components and Conservation Measures on the Lower Colorado River" have been replaced by and renamed as the CRWDA. In addition, there are other agreements among these California entities that facilitate the transfers in the CRWDA, including: a water transfer agreement between SDCWA and IID dated April 29, 1998 (SDCWA/IID Water Transfer Agreement) as amended, an amended and restated water exchange agreement between SDCWA and MWD, an Agreement for Acquisition of Conserved Water between IID and MWD, an Agreement for Acquisition of Conserved Water between IID and CVWD, and an Agreement for Acquisition of Water between CVWD and MWD along with the Allocation Agreement.

- C. The 4.4 Plan includes water transfers among California contractors of Colorado River water that result in changes in point of delivery and

diversion of up to 400,000 acre feet of Colorado River water per year to Lake Havasu from Imperial Dam or from a point between Lake Havasu and Imperial Dam. Certain changes in point of delivery and diversion are addressed in the CRWDA.

- D. In order to execute the CRWDA and changes in point of delivery and diversion, Reclamation must comply with all applicable laws and regulations, including the Endangered Species Act (ESA), 16 U.S.C. § 1531 *et seq.* To meet its obligations under the ESA, Reclamation entered into formal consultation with the United States Fish and Wildlife Service (FWS) pursuant to Section 7 of the ESA. Also included in that Section 7 consultation is the Secretary's adoption of Colorado River Interim Surplus Guidelines (ISG). As part of the Section 7 consultation, Reclamation submitted to FWS a Biological Assessment, dated August 30, 2000, for certain proposed actions, including adoption of proposed Interim Surplus Criteria (hereinafter, "Guidelines" or "ISG,") and actions contemplated under the 4.4 Plan, including actions contemplated under the CRWDA. That Biological Assessment has been supplemented by Reclamation memoranda to FWS dated November 30, 2000, and January 9, 2001 (collectively the "BA").
- E. FWS issued a Biological Opinion (BO) dated January 12, 2001, regarding the proposed actions covered in the BA, that include certain conservation

measures, mitigation measures, and Reasonable and Prudent Measures specified as related to the 4.4 Plan (collectively the “Measures”) which are intended to offset potential impacts of the proposed actions. Reclamation has agreed to implement the Measures by letter dated January 11, 2001 and will continue to do so with the cooperation and support of SDCWA and MWD pursuant to the terms of this Agreement. Reclamation, MWD, and SDCWA therefore desire to enter into a binding agreement to describe and determine their mutual responsibilities for the cost and implementation of the Measures.

- F. The CRWDA provides that a total of up to 145,000 acre-feet of water conserved by IID could be transferred to urban agencies in ISG benchmark years. This amount is within the amounts of transferred water considered in the Final Environmental Impact Statement, Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions (Final IA EIS) and January 12, 2001 BO. The Measures that will be implemented under this Agreement are adequate to address this component of the CRWDA.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Upon execution of the CRWDA and initiation of transfers pursuant to the 4.4 Plan, which includes actions contemplated under the CRWDA, Reclamation shall implement the Measures. The Measures shall include

any actions that may be required regarding potential impacts on 5,404 acres of potential willow flycatcher habitat identified in the BA and BO, as a result of reinitiation of consultation on operations and maintenance on the Colorado River if the Lower Colorado River Multi-Species Conservation Plan is not completed and implemented.

2. Paragraph 4 of the CRWDA identifies transfers and changes in point of delivery and diversion for the benefit of SDCWA and MWD, which are within the scope of actions contemplated under the 4.4 Plan. Allocation of the changes in point of delivery and diversion of up to 400,000 acre feet per year covered in the BO for purposes of compliance with the ESA, including the benefits derived from compliance with the Measures, shall be as determined by separate agreement between SDCWA and MWD.
3. In order to assist Reclamation with the implementation of the Measures, and generally to cooperate in the protection of wildlife and their habitat, SDCWA and MWD shall provide a total of SIX MILLION, TWO HUNDRED THIRTY SIX THOUSAND DOLLARS (\$6,236,000) to Reclamation to be used to implement the Measures, under the following conditions:
 - a. SDCWA shall provide funds (Funds) to Reclamation in the amount of \$4,329,343, in the manner provided herein.

- b. MWD shall provide funds (Funds) to Reclamation in the amount of \$1,906,657, in the manner provided herein.
- c. Within 30 days of execution of this Agreement, SDCWA and MWD shall each cause their respective Funds to be placed in separate interest bearing accounts (“Accounts”). SDCWA and MWD shall each maintain their respective Accounts until such time as the transfers pursuant to the CRWDA are initiated. Interest earned shall remain in these accounts and shall not be withdrawn by either SDCWA or MWD without Reclamation’s agreement. SDCWA and MWD shall provide Reclamation a copy of the bank statements for these accounts monthly. SDCWA may in its discretion maintain its Account through or shift its account to a joint powers authority formed under the laws of the State of California for the purpose of funding certain environmental mitigation costs related to the 4.4 Plan. When such transfers are initiated, SDCWA and MWD shall each give Reclamation written withdrawal authority to debit the Accounts utilizing the Department of Treasury Preauthorized Payment Program. Annually, Reclamation will provide a schedule of estimated monthly costs to be withdrawn from each Account. The monthly costs may be updated quarterly as necessary. The first working day of each month, Reclamation will withdraw funds from the Accounts based on the monthly estimate.

Reclamation shall debit each Account in the same proportion as the Funds provided by SDCWA and MWD in accordance with Sections 3a and 3b, above. In the event that funds in either Account become exhausted, any remaining funds in the other Account shall then be debited without regard to any proportionate share.

d. All funds, including interest earned, in the Accounts shall be made available to Reclamation to be used solely for actions to implement the Measures. Before committing funds in the Accounts to a particular action to implement the Measures, Reclamation shall notify SDCWA and MWD of the proposed action and provide them each a reasonable opportunity to review and comment on such action.

e. The parties recognize that SDCWA and MWD must comply with applicable provisions of California law in order to undertake certain actions identified in the CRWDA. Reclamation, in consultation with SDCWA and MWD, shall, to the extent permitted under applicable law, regulation, and the terms of the BO, ensure that all actions taken to implement the Measures are compatible with and in furtherance of measures that may be required of SDCWA and MWD under California law applicable to SDCWA and MWD including the California Endangered Species Act. To that end, Reclamation, SDCWA, and MWD intend to execute a memorandum of understanding with the

California Department of Fish and Game to carry out the purposes of this Section 3e. Reclamation's implementation of this Agreement is not, and shall not, be interpreted to be an admission of the applicability of California law to the actions of Reclamation under this or any other Agreement.

f. Within 30 days of completion of all Measures, Reclamation shall so notify SDCWA and MWD who may then close their respective Accounts and utilize any remaining funds as they see fit with no further obligation under this Agreement.

g. Reclamation shall retain detailed records of costs and expenditures from the Accounts for a period beginning with its first withdrawals from the account and ending three years from the date such account is terminated due to completion of all Measures or exhaustion of the Accounts. Such records shall be available for inspection by SDCWA and/or MWD. If SDCWA or MWD determines an audit is necessary, such audit shall be conducted at the expense of the Party or Parties desiring the audit and only as authorized by federal law. Should such audit result in funds being returned to the Accounts, the Party or Parties desiring the audit shall be reimbursed for their costs of the audit from funds returned to the Accounts as a result of the audit.

4. In the event that Funds provided to Reclamation by SDCWA and MWD in accordance with Section 3, above, are insufficient to fund all Measures for which Reclamation is responsible, Reclamation shall nevertheless perform all such Measures, and shall implement the other actions described above in Section 1, at no additional cost or expense of any kind to SDCWA and MWD unless agreed to in writing by SDCWA or MWD.
5. MWD and SDCWA each indemnify and hold each other harmless from all claims, demands, losses, and liability to the extent that the same are the result of an error, omission, or negligent or wrongful act of its own officers, employees, agents, or any other person acting pursuant to its control in performing under this Agreement.
6. This Agreement shall be legally binding on all Parties and may be modified only by a subsequent written amendment executed by all of the Parties.
7. This Agreement contains the entire agreement among the Parties with respect to the subject matter hereof, and supercedes all prior negotiations, understandings, or agreements.
8. This Agreement shall be effective as of the date that it has been executed by all parties, and shall remain effective until completion of all

terms and conditions herein, except as otherwise provided in this Agreement.

9. To provide for effective communication among all of the parties, each Party shall designate a representative to serve as the point of contact on all matters relating to this Agreement. Initial representatives are designated in section 13 below. Each Party shall advise the other Parties of the name, mailing address, e-mail address, and telephone number of the new representative in accordance with section 13 below.
10. All information and data obtained or developed by any of the Parties in connection with performance of work under this Agreement shall be available for review upon request of any Party's representative without charge.
11. As described above, Federal and California law governs this Agreement. In case of conflict between Federal and California law, Federal law shall control.
12. Nothing herein shall be construed (a) as prohibiting any Party from pursuing and prosecuting any remedy in any appropriate court of the United States or State of California which would otherwise be available to such Party, or (b) as depriving any Party of any defense thereto which would otherwise be available.

13. Notices that are necessary to carry out the provisions of this Agreement must be in writing and delivered personally to the Party's representative, or mailed to the representative, postage prepaid, at his/her address. The representatives and their addresses are as follows:

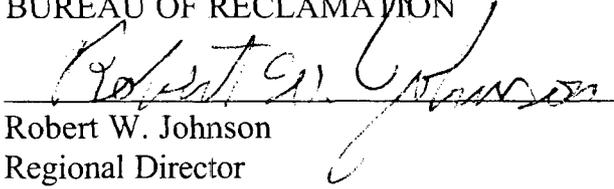
If to MWD: Attention: Ms. Laura Simonek
 The Metropolitan Water District
 of Southern California
 700 North Alameda St.
 Los Angeles, California 90012-2944
 or
 P.O. Box 54153
 Los Angeles, California 90054-0153

If to SDCWA: Attention: Mr. Larry Purcell
 San Diego County Water Authority
 4677 Overland Avenue
 San Diego, California 92123

If to Reclamation:
 Area Manager, Boulder Canyon Operations Office
 Attention: Ms. Jayne Harkins
 U. S. Bureau of Reclamation
 P.O. Box 61470
 Boulder City, Nevada 89006-1470

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed.

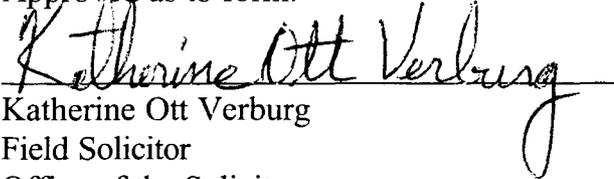
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION



Robert W. Johnson
Regional Director
Lower Colorado Region
U. S. Bureau of Reclamation

Date: 10/10/03

Approved as to form:



Katherine Ott Verburg
Field Solicitor
Office of the Solicitor
Department of the Interior

Date: 10-10-03

SAN DIEGO COUNTY WATER AUTHORITY



Maureen A. Stapleton
General Manager

Date: 10-10-03

Approved as to form:



Daniel S. Hentschke
General Counsel

Date: 10/10/03

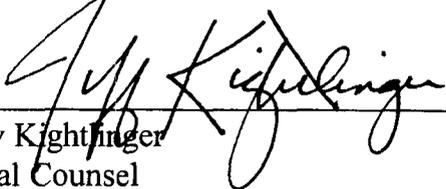
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA



Ronald Gastelum
~~General Manager~~ Chief Executive Officer

Date: 12/12/03

Approved as to form:



Jeffrey Kightlinger
General Counsel

Date: 10/10/03